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55177

Requestor's Name: Natalie Davis  Serial Number: 09/613707

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Please write a detailed statement of search topic. Describe specifically as possible the subject matter to be searched. Define any terms that may have a special meaning. Give examples or relevant citations, authors keywords, etc., if known. For sequences, please attach a copy of the sequence. You may include a copy of the broadest and/or most relevant claim(s).

Please search for a murine mammary ~~adenocarcinoma cell~~ adenocarcinoma cell line derived from a murine progestin-independent C7-HI Tumor, wherein the cell line ~~is~~ is estrogen + progesterone receptor positive. Search for an in vitro method of testing how a hormone OR anti hormone affects the cell proliferation of the MC7-L1 cell line.

## STAFF USE ONLY

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Set     Items   Description
S1    1617209   MURINE OR MOUSE
S2         33   PROGESTIN(3N)INDEPENDENT(5N) (TUMOR? ? OR TUMOUR? ? OR CAN-
              CER? ? OR CARCINOMA? ?)
S3     153015   MAMMARY
S4     191156   ADENOCARCINOMA? ?
S5      75953   ESTROGEN(3N) RECEPTOR? ?
S6      37485   PROGESTERONE (3N) RECEPTOR? ?
S7          8   C7(3N)HI OR C7(3N)H1
S8         11   RD S2 (unique items)
S9          4   RD S7 (unique items)
S10         3   MC7(3N)L1
S11         1   RD S10 (unique items)
S12      1855   S1(5N) S3 (5N) S4
S13        23   S12 AND S5
S14        20   S12 AND S6
S15        11   RD S13 (unique items)
S16        10   RD S14 (unique items)
S17        28   S8 OR S9 OR S11 OR S15 OR S16
S18      2442   AU=LANARI? OR AU=MOLINOLO? OR AU=LUTHY?
S19        17   S12 AND S18
S20         6   RD S19 (unique items)
S21        31   S17 OR S20
?t 21/7/all

 21/7/1     (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

11533862   21326139   PMID: 11333273
  Transactivation specificity of glucocorticoid versus progesterone
 receptors . Role of functionally different interactions of transcription
factors with amino- and carboxyl-terminal receptor domains.
  Song LN; Huse B; Rusconi S; Simons SS
  Steroid Hormones Section, NIDDK/LMCB, National Institutes of Health,
Bethesda, MD 20892, USA.
  Journal of biological chemistry (United States)  Jul 6 2001,  276  (27)
 p24806-16,  ISSN 0021-9258  Journal Code: HIV
  Languages: ENGLISH
  Document type: Journal Article
  Record type: Completed
  A major unanswered question of glucocorticoid and progesterone action is
how different whole cell responses arise when both of the cognate receptors
can bind to, and activate, the same hormone response elements. We have
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documented previously that the EC(50) of agonist complexes, and the partial agonist activity of antagonist complexes, of both glucocorticoid receptors (GRs) and progesterone receptors (PRs) are modulated by increased amounts of homologous receptor and of coregulators. We now ask whether these components can differentially alter GR and PR transcriptional properties. To remove possible cell-specific differences, we have examined both receptors in the common environment of a line of mouse mammary adenocarcinoma (1470.2) cells. In order to segregate the responses that might be due to unequal nucleosome reorganization by the two receptors from those reflecting interactions with other components, we chose a transiently transfected reporter containing a simple glucocorticoid response element (i.e. GREtkLUC). No significant differences are found with elevated levels of either receptor. However, major, qualitative differences are seen with the corepressors SMRT and NCoR, which afford opposite responses with GR and PR. Studies with chimeric GR/PR receptors indicate that no one segment of PR or GR is responsible for these properties and that the composite response likely involves interactions with both the amino and carboxyl termini of receptors. Collectively, the data suggest that GR and PR induction of responsive genes in a given cell can be differentially controlled, in part, by unequal interactions of multiple receptor domains with assorted nuclear cofactors.

Record Date Created: 20010702

21/7/2 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

11150620 21179014 PMID: 11281653

Mechanisms of cell cycle arrest in response to tgf-beta in progestin -dependent and - independent growth of mammary tumors.

Salatino M; Labriola L; Schillaci R; Charreau EH; Elizalde PV

Instituto de Biologia y Medicina Experimental, Obligado 2490, Buenos Aires, 1428, Argentina

Experimental cell research (United States) Apr 15 2001, 265 (1) p152-66, ISSN 0014-4827 Journal Code: EPB

Languages: ENGLISH

Document type: Journal Article

Record type: In Process

TGF-beta1 modulation of cell cycle components was assessed in an experimental model in which the synthetic progestin medroxyprogesterone acetate (MPA) induced mammary tumors in Balb/c mice. TGF-beta1 inhibited both MPA-induced proliferation of progestin-dependent C4HD epithelial cells and proliferation of the progestin-independent variant cell type C4HI, arresting cells in G(1) phase of the cell cycle. Progestin-independent 60 epithelial cells evidenced reduced response to TGF-beta1 antiproliferative effects. TGF-beta1 inhibition of cyclins D1 and A expression and up-regulation of p21(CIP1) levels were the common findings in all three cell types. In addition, a significant content reduction of cyclin D1/cdk4 and cyclin A/cdk2 complexes was found after TGF-beta1 inhibition of MPA-dependent and -independent proliferation. TGF-beta1 inhibited cyclin D2 expression and up-regulated p27(KIP1) levels only when acting as inhibitor of MPA-induced proliferation of C4HD cells. Regulation of these two cell cycle components resulted in decreased cyclin D2/cdk2 complex and in increased p27(KIP1) association with cdk2 in C4HD cells treated with TGF-beta1. These two molecular mechanisms, unobserved in progestin-independent growth of C4HI or 60 cells, were associated with a significantly higher degree of inhibition of cdk2 kinase activity in C4HD

cells compared to that found in TGF-beta-treated C4HI or 60 cells. Reduced sensitivity of 60 cells to the growth-inhibitory effects of TGF-beta1 correlated with significantly lower levels of p15(INK4B), p21(CIP1), and p27(KIP1) expressed in these cells, compared to the levels present in C4HD or C4HI cells, and correlated as well with lack of expression of p16(INK4). Thus, common targets were found to exist in TGF-beta1 inhibitory action on breast cancer cells, but regulation of specific targets was found when TGF-beta1-inhibited proliferation driven by the progesterone receptor. 
Record Date Created: 20010403

21/7/3 (Item 3 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

10930575 21036723 PMID: 11196177
Five novel hormone-responsive cell lines derived from murine mammary ductal carcinomas: in vivo and in vitro effects of estrogens and progestins.
Lanari C; Luthy I; Lamb CA; Fabris V; Pagano E; Helguero LA; Sanjuan N; Merani S; Molinolo AA
Instituto de Biologia y Medicina Erperimental, Consejo Nacional de Investigaciones Cientificas y Tecnicas, Buenos Aires, Argentina.
Cancer research (United States) Jan 1 2001, 61 (1) p293-302, ISSN 0008-5472 Journal Code: CNF
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
We have developed an experimental model of mammary carcinogenesis in which the administration of medroxyprogesterone acetate (MPA) to female BALB/c mice induces progestin-dependent ductal metastatic mammary tumors with high levels of estrogen receptor (ER) and progesterone receptor (PR). Through selective transplants in untreated mice, we have obtained progestin-independent variants, still expressing high levels of ER and PR. Primary cultures of the MPA-induced carcinomas C4-HD and C7 -HI were set up, and after 3-4 months, several different cell lines were obtained. Four of these, MC4-L1, MC4-L2, MC4-L3, and MC4-L5 were established from C4-HD and a fifth, MC7 - L1 , from C7 -HI . All cells were of epithelial origin, as demonstrated by electron microscopy and by immunocytochemical identification of cytokeratin and cadherin. In vitro MC4-L1, MC4-L3, and MC4-L5 showed a typical epithelial morphology; when transplanted in vivo, they originated metastatic carcinomas with different degrees of differentiation. MC4-L2 and MC7 - L1 deviated from the standard epithelial picture; they disclosed a spindle-shaped morphology in vitro and in vivo gave rise to a biphasic spindle cell/tubular carcinoma and an anaplastic carcinoma, respectively; both lines gave rise to metastases. This differential morphology correlated with a higher degree of aggressiveness, as compared with MC4-L1, MC4-L3, and MC4-L5. ERs and PRs were detected by binding, immunocytochemistry, and Western blot. In vitro, MC4-L2 and MC7 - L1 were stimulated by MPA (nM to microM) and 17beta-estradiol (nM and 10 nM); no significant stimulation was observed in MC4-L1, MC4-L3, and MC4-L5 under the same experimental conditions. In vivo, MPA significantly stimulated tumor growth in all epithelioid lines but not in MC4-L2 and MC7 - L1 . A progestin-dependent growth pattern was confirmed for MC4-L1, MC4-L3, and MC4-L5 in successive transplants, whereas MC4-L2 and MC7 - L1 behaved as progestin independent . This is the first description of mouse mammary carcinoma cell lines expressing ER and

PR. The different in vitro hormone responses as compared with in vivo and the differential effects of 17beta-estradiol in the parental tumors and in cell lines render these lines useful tools for the in vitro and in vivo study of hormone regulation of tumor growth and metastases.
Record Date Created: 20010119

21/7/4 (Item 4 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

10437200 20065105 PMID: 10597237
Interactions between progestins and heregulin (HRG) signaling pathways: HRG acts as mediator of progestins proliferative effects in mouse mammary adenocarcinomas.
Balana ME; Lupu R; Labriola L; Charreau EH; Elizalde PV
Instituto de Biologia y Medicina Experimental (IBYME), Buenos Aires, Argentina.
Oncogene (ENGLAND) Nov 4 1999, 18 (46) p6370-9, ISSN 0950-9232 Journal Code: ONC
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
The present study addressed links between progestin and heregulin (HRG) signaling pathways in mammary tumors. An experimental model of hormonal carcinogenesis, in which the synthetic progestin medroxyprogesterone acetate (MPA) induced mammary adenocarcinomas in female Balb/c mice, was used. MPA induced an in vivo up-regulation of HRG mRNA expression in progestin-dependent (HD) tumor lines. Mammary tumor progression to a progestin - independent (HI) phenotype was accompanied by a high constitutive expression of HRG. The HRG message arose from the tumor epithelial cells. Primary cultures of malignant epithelial cells from a HD tumor line were used to investigate HRG involvement on cell proliferation. HRG induced a potent proliferative effect on these cells and potentiated MPA mitogenic effects. Blocking endogenous HRG synthesis by antisense oligodeoxynucleotides (ASODNs) to HRG mRNA inhibited MPA-induced cell growth, indicating that HRG acts as a mediator of MPA-induced growth. High levels of ErbB-2 and ErbB-3 expression and low ErbB-4 levels were found in HD cells. Treatment of these cells with either MPA or HRG resulted in tyrosine phosphorylation of both ErbB-2 and ErbB-3. Furthermore, both HRG and MPA proliferative effects were abolished when cells were treated with ASODNs to ErbB-2 mRNA, providing evidence for a critical role of ErbB-2 in HRG-induced growth. Finally, blocking type I insulin-like growth factor receptor (IGF-IR) expression with ASODN resulted in the complete inhibition of HRG proliferative effect, demonstrating that a functional IGF-IR is required for HRG mitogenic activity. These results provide the first evidence of interactions between progestins and HRB/ErbB signal transduction pathways in mammary cancer and the first demonstration that IGF-IR is required for HRG proliferative effects.
Record Date Created: 20000110

21/7/5 (Item 5 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

10324913 99098456 PMID: 9883987
Involvement of insulin-like growth factors-I and -II and their receptors in medroxyprogesterone acetate-induced growth of mouse mammary

adenocarcinomas.

Elizalde PV; Lanari C ; Molinolo AA ; Guerra FK; Balana ME; Simian M; Iribarren AM; Charreau EH

Instituto de Biologia y Medicina Experimental, Buenos Aires, Argentina. elizalde@proteus.dna.uba.ar

Journal of steroid biochemistry and molecular biology (ENGLAND) Nov 1998, 67 (4) p305-17, ISSN 0960-0760 Journal Code: AX4

Languages: ENGLISH

Document type: Journal Article

Record type: Completed

The role of the insulin-like growth factors (IGFs) system was investigated in hormone-dependent (HD) and -independent (HI) in vivo lines of the medroxyprogesterone acetate (MPA)-induced mammary tumor model in Balb/c mice. IGF-II protein and message showed a three- to four-fold increase in HD lines growing in MPA-treated mice, as compared with HD tumors growing in untreated mice. Progression to a hormone-independent phenotype in all these lines was accompanied by a high constitutive expression of IGF-II. Similar IGF-I mRNA levels were detected in HD and HI lines. Both IGF-I and -II messages arose from the malignant epithelial cells, as shown by in situ hybridization studies. A significant decrease in Man-6P/type II IGF-R content was detected in HD tumors growing in MPA-treated mice as compared with HD lines growing in untreated mice. On the other hand, in HI tumors, notwithstanding high IGF-II synthesis, the levels of Man-6P/type II IGF-R remain high. Competitive inhibition and affinity labeling studies showed an almost exclusive binding of IGF-II to Man-6P/type II IGF-R on tumor membranes. The involvement of IGFs in the growth of epithelial primary cultures of the C4-HD line was evaluated. Exogenous IGF-I potentiated MPA stimulatory effect at concentrations of 50-100 ng/ml. Treatment of C4-HD cells with antisense oligodeoxynucleotides (ASODNs) to type I IGF-R and to IGF-II RNA resulted in a dose-dependent inhibition of MPA-mediated cell proliferation. The inhibition caused by IGF-II ASODNs could not be overcome by the addition of IGF-II up to 150 ng/ml. ASODNs to type I IGF-R at 40 microg/ml reduced by 75% the number of type I IGF-R; ASODNs to IGF-II at 1 microM decreased by 83% the levels of IGF-II protein. Our results provide support for the involvement of IGF-I and -II in MPA-induced mammary tumor growth by autocrine pathways.

Record Date Created: 19990122

21/7/6 (Item 6 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

10301650 98223137 PMID: 9563648

Involvement of EGF in medroxyprogesterone acetate (MPA)-induced mammary gland hyperplasia and its role in MPA-induced mammary tumors in BALB/c mice.

Molinolo A; Simian M; Vanzulli S; Pazos P; Lamb C; Montecchia F; Lanari C

Instituto de Biologia y Medicina Experimental, Academia Nacional de Medicina, Buenos Aires, Argentina. molinolo@proteus.dna.edu.ar

Cancer letters (IRELAND) Apr 10 1998, 126 (1) p49-57, ISSN 0304-3835 Journal Code: CMX

Languages: ENGLISH

Document type: Journal Article

Record type: Completed

In previous papers we have demonstrated that sialoadenectomy inhibited MPA-induced mammary tumorigenesis in BALB/c mice. To further explore the role of EGF in this experimental model, we evaluated its effects on mammary

glands of sialoadenectomized (sialox) MPA-treated female mice and on tumor growth. MPA-treated sialox mice were injected s.c. (n = 3) or not (n = 6) with 5 microg EGF every 36 h for 45 days; MPA-treated sham-operated mice were used as controls (n = 6). Mammary glands from sialox MPA-treated mice are considerably less developed as compared with sham-operated animals. The exogenous administration of EGF restores the usual MPA-induced growth pattern of the glands, thus confirming a role for EGF either in mediating or cooperating with MPA in inducing the mammary architectural changes observed in MPA-treated mice. On the other hand, primary cultures of progestin-dependent (PD) ductal mammary adenocarcinoma in vivo tumor lines and of lobular progestin -independent (PI) tumor lines were used to evaluate the effect of EGF on tumor growth. In vitro EGF was found to stimulate cell proliferation of lobular PI tumor cells and of fibroblastic cells from both types of tumors at concentrations higher than 0.1-0.5 ng/ml and in the presence of 1-5% of charcoal-stripped fetal calf serum. Conversely, no proliferative effects were observed in ductal PD cells under the same experimental conditions, regardless of the presence of 10 nM MPA. It can be concluded that although EGF plays an important role in MPA-induced mammary carcinogenesis, it is not necessary in PD tumor growth.
Record Date Created: 19980507

21/7/7 (Item 7 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

10300805 98156837 PMID: 9497105
Establishment and characterization of a new mammary adenocarcinoma cell line derived from MMTV neu transgenic mice.
Sacco MG; Gribaldo L; Barbieri O; Turchi G; Zucchi I; Collotta A; Bagnasco L; Barone D; Montagna C; Villa A; Marafante E; Vezzoni P
Istituto di Tecnologie Biomediche Avanzate, CNR, Milano, Italy.
Breast cancer research and treatment (NETHERLANDS) Jan 1998, 47 (2) p171-80, ISSN 0167-6806 Journal Code: A8X
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
A new murine cell line, named MG1361, was established from mammary adenocarcinomas arising in a MMTV-neu transgenic mouse lineage where breast tumors develop in 100% of females, due to the overexpression of the activated rat neu oncogene in the mammary gland. The MG1361 cell line shows an epithelial-like morphology, has a poor plating efficiency, low clonogenic capacity, and a doubling time of 23.8 hours. Karyotype and flow cytometry analysis revealed a hypotetraploid number of chromosomes, whereas cell cycle analysis showed 31.2% of cells to be in the G1 phase, 21.4% in S and 47.4% in G2 + M. This cell line maintains a high level of neu expression in vitro. The MG1361 cell line was tumorigenic when inoculated in immunodeficient (nude) mice and the derived tumors showed the same histological features as the primary tumors from which they were isolated. MG1361 cells were positive for specific ER and PgR binding which was competed by tamoxifen, making this cell line useful for the evaluation of endocrine therapy. Moreover, they were sensitive to etoposide treatment, suggesting that they could be a model for the study of chemotherapy-induced apoptosis. As the tumors arising in MMTV-neu transgenic mice have many features in common with human mammary adenocarcinomas (Sacco et al., Gene Therapy 1995; 2: 493-497), this cell line can be utilized to perform basic studies on the role of the neu oncogene in the maintenance of the transformed phenotype, and to test novel protocols of therapeutic

strategies.
Record Date Created: 19980421

21/7/8 (Item 8 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

10235893 99351685 PMID: 10424399
Reversal of estrogen-resistance in murine mammary adenocarcinomas.
Montecchia MF; Molinolo A ; Lanari C
Laboratory of Hormonal Carcinogenesis, Instituto de Biologia y Medicina Experimental, Consejo Nacional de Investigaciones Cientificas y Tecnicas, Buenos Aires, Argentina.
Breast cancer research and treatment (NETHERLANDS) Mar 1999, 54 (2) p93-9, ISSN 0167-6806 Journal Code: A8X
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
From mouse mammary progestin-dependent (PD) adenocarcinomas induced with medroxyprogesterone acetate (MPA) we developed several in vivo lines that are maintained by subcutaneous syngeneic passages in MPA-treated mice and express estrogen (ER) and progesterone receptors (PR). Although most lines remained PD, with time some progestin -independent (PI) variants arose. Both PD and PI tumors regress with estrogen treatment although estrogen-resistant variants may also arise. The object of this paper was to investigate the reversibility of estrogen-resistance and its possible relation with hormone receptor down-regulation. Tumor regression was induced in a progestin -independent tumor line (BET) by treatment with a 5 mg 17beta-estradiol (E2) silastic pellet. One of the tumors started to grow disclosing an estrogen-resistant pattern of growth. This tumor line (BET-R) was transplanted into E2-treated and untreated animals (n = 4-6), selecting for the next passage tumors growing in treated animals. Seven new sublines were obtained at different passages by selecting for the next passage the tumors that had grown in untreated mice (BET-Ra-BET-Rg), until no tumors grew in E2-treated mice. ER and PR were measured by a ligand-binding, dextran-coated charcoal method using a single saturating point. From the seven sublines initiated, the first four proved to be reversible after 3-6 generation transplantation and the last three did not revert. A difference in PR expression between BET and BET-R ($p < 0.05$) was registered, but it did not correlate with the specific hormone behavior since two reverted lines had a pattern similar to that of BET and the other two were similar to BET-R. The expression of PR was higher in E2-treated mice ($p < 0.05$) and highly variable in the parental line. This led us to study the expression of PR at different stages of the estrous cycle. Higher levels of PR were observed in proestrous, estrous, and metestrous ($p < 0.05$) than in diestrous, and undetectable levels were found in ovariectomized mice. No differences in ER expression were detected during the estrous cycle. It can be concluded that under certain experimental conditions, estrogen-resistance is a reversible phenomenon. The experimental manipulation of hormone resistance may help develop strategies to modify the response to anti-hormones in humans.
Record Date Created: 19990908

21/7/9 (Item 9 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

10100077 99229872 PMID: 10215033

Progesterone receptor involvement in independent tumor growth in MPA-induced murine mammary adenocarcinomas.

Montecchia MF; Lamb C; Molinolo AA ; Luthy IA ; Pazos P; Charreau E; Vanzulli S; Lanari C

Instituto de Biologia y Medicina Experimental, CONICET (Consejo Nacional de Investigaciones Cientificas y Tecnicas y Tecnicas), Buenos Aires, Argentina.

Journal of steroid biochemistry and molecular biology (ENGLAND) Jan 1999, 68 (1-2) p11-21, ISSN 0960-0760 Journal Code: AX4

Languages: ENGLISH

Document type: Journal Article

Record type: Completed

We have developed a model of hormonal carcinogenesis in BALB/c female mice, in which MPA induced ductal mammary adenocarcinomas, expressing high levels of estrogen and progesterone receptors (ER and PR). A series of tumor lines, retaining both PR and ER expression, were obtained from selected tumors, which are maintained by syngeneic passages. In this model progesterone behaves as the growth-stimulating hormone (progesterone-dependent or PD tumors), whereas estrogens induce tumor regression. Through selective treatments we were able to derive a series of progesterone-independent (PI) variants. These lines do not require progesterone treatment to grow in ovariectomized female BALB/c mice, but retain, however, the expression of ER and PR. The aim of this paper is to investigate a possible regulatory role of the progesterone receptor (PR) on PI tumor growth. ER and PR were detected by immunocytochemistry in all lines studied. They were also characterized using biochemical assays and Scatchard plots. No differences in Kd of PR or ER were detected in PI variants. AR or GR were not detected in tumor samples using biochemical assays. Estradiol (5 mg silastic pellet) induced complete tumor regression in all tumors tested. We also evaluated the effects of different antiprogestins on tumor growth. Onapristone (10 mg/kg/day) and mifepristone (4.5 mg/kg/day) were able to induce complete tumor regression. The antiandrogen flutamide (5 mg silastic pellet) had no effect on tumor growth in agreement with the lack of androgen receptors. We used an in vitro approach to corroborate that the antiprogestin-induced inhibition was not attributable to an intrinsic effect. Cultures of a selected PI line were treated with PR antisense oligodeoxynucleotides (ASPR) to inhibit in vitro cell proliferation. A significant decrease of 3H-thymidine uptake was observed in cells of a PI line growing in the presence of 2.5% charcoalized fetal calf serum and 0.8-20 microg/ml ASPR. It can be concluded that the PR pathway is an essential path in the growth stimulation of PI tumors.

Record Date Created: 19990506

21/7/10 (Item 10 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

08862886 95012868 PMID: 7927919

Effect of sialoadenectomy on medroxyprogesterone-acetate-induced mammary carcinogenesis in BALB/c mice. Correlation between histology and epidermal-growth-factor receptor content.

Kordon EC; Guerra F; Molinolo AA; Elizalde P; Charreau EH; Pasqualini CD; Montecchia F; Pazos P; Dran G; Lanari C

Division Medicina Experimental, Instituto de Investigaciones Hematologicas, Academia Nacional de Medicina, Buenos Aires, Argentina.

International journal of cancer. Journal international du cancer (UNITED

STATES) Oct 15 1994, 59 (2) p196-203, ISSN 0020-7136 Journal Code: GQU

Languages: ENGLISH

Document type: Journal Article

Record type: Completed

To evaluate the possible involvement of the salivary glands in the modulation of medroxyprogesterone (MPA)-induced mammary tumorigenesis, 48 sialoadenectomized virgin BALB/c female mice and 47 controls were treated with 40mg MPA depot s.c. every 3 months for 1 year. Mammary tumors developed in 11 sialoadenectomized and in 34 control mice with similar latencies. In both groups, 75% of the tumors were ductal and progestin -dependent (PD) while the remainder were lobular and progestin - independent (PI). Epidermal growth factor (EGF) levels were measured in salivary glands (SG-EGF) and serum (S-EGF) in both groups. MPA induced a significant increase in SG-EGF and in S-EGF that became evident only after 1 month of MPA treatment. No increase in S-EGF was detected in MPA-treated sialoadenectomized mice, indicating that salivary glands are the major source of S-EGF. The presence of EGF receptors (EGF-R) was investigated in ductal PD and PI tumor lines and compared with 8 PI tumor lines of lobular origin. A significant difference in EGF-R content was found between lobular and ductal tumors. No increase in EGF-R was noted when ductal tumors became autonomous. EGF-R did not correlate with tumor growth rate and there was an inverse correlation between EGF-R and steroid receptors. When the effect of sialoadenectomy on tumor growth was tested in vivo in syngeneic transplants of 2 ductal PD, 1 ductal PI and 2 lobular PI mammary adenocarcinomas, it was not found to be significant when compared with the controls. It may be concluded that SG-EGF plays an important role in the induction of mammary adenocarcinomas by MPA, while it has no significant effect on the growth of established tumors.

Record Date Created: 19941115

21/7/11 (Item 11 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

08473281 95179617 PMID: 7874571

Correlation of TGF-beta 1 expression with medroxyprogesterone acetate responsiveness in mouse mammary adenocarcinomas.

Elizalde PV; Guerra FK; Gravano M; Lanari C ; Lippman ME; Charreau EH; Lupu R

Instituto de Biologia y Medicina Experimental (IBYME) Obligado 2490, Buenos Aires, Argentina.

Cancer investigation (UNITED STATES) 1995, 13 (2) p173-80, ISSN 0735-7907 Journal Code: CAI

Languages: ENGLISH

Document type: Journal Article

Record type: Completed

We investigated the expression of transforming growth factors beta 1 and alpha (TGF-beta 1, TGF-alpha) in hormone-responsive (MPA-R) and unresponsive (MPA-U) tumor lines obtained from medroxyprogesterone acetate (MPA)-induced mammary adenocarcinomas in BALB/c mice. The tumors were transplanted into MPA-treated and untreated mice. TGF-beta 1 gene expression was observed in the MPA-R lines growing in untreated animals, but not in MPA-treated mice. TGF-beta 1 mRNA was not detected in the MPA-U tumor lines growing in either MPA-treated or untreated animals. In MPA-R lines the levels of TGF-beta 1 expression were inversely correlated to growth rate. High-affinity TGF-beta 1 receptors were present in the MPA-R

tumors. These results suggest that one of the mechanisms by which MPA exerts its proliferative effect on MPA-R tumor lines is inhibition of the expression of TGF-beta 1. Thus, the lack of expression of TGF-beta 1 in MPA-U tumors may be related to the acquisition of autonomous growth.
Record Date Created: 19950405

21/7/12 (Item 12 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

07115120 94169394 PMID: 8123867
Progesterone induction of mammary carcinomas in BALB/c female mice. Correlation between progestin dependence and morphology.
Kordon EC; Molinolo AA; Pasqualini CD; Charreau EH; Pazos P; Dran G; Lanari C
Departamento de Medicina Experimental, Academia Nacional de Medicina, Buenos Aires, Argentina.
Breast cancer research and treatment (NETHERLANDS) Oct 1993, 28 (1) p29-39, ISSN 0167-6806 Journal Code: A8X
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
We have demonstrated that medroxyprogesterone acetate (MPA), when administered in high doses, induces mammary carcinomas in virgin female BALB/c mice. Since one of the possible explanations for this effect was its progestagenic effects, we decided to investigate whether progesterone (Pg) alone could also induce mammary adenocarcinomas in our model and if MPA at doses lower than those used to establish the model was also carcinogenic. A total of 136 mice were subdivided into 3 groups: Group 1, 44 mice were implanted s.c. with 40 mg Pg silastic pellets at the beginning of the experiment, and 6 months later with a 20 mg Pg pellet; Group 2, 45 mice were similarly treated with MPA pellets; Group 3, 47 mice were inoculated s.c. with 40 mg MPA every three months. At the end of 20 months, 9 animals had developed mammary tumors in Group 1, 18 in Group 2 and 34 in Group 3 (actuarial incidence = 28%, 58%, and 98%, respectively); tumor latency was similar in all groups: 46.2 +/- 13.1, 51.3 +/- 9.9, and 50.1 +/- 2.1 weeks, respectively. Seven (Group 1), 14 (Group 2), and 25 (Group 3) tumors were transplanted into syngeneic mice to determine progestin dependence. All tumors, except one from Group 1, were histologically characterized. In Group 1 (Pg 60 mg), 4 tumors (67%) were infiltrating lobular carcinomas and 2 were ductal carcinomas (33%). In Group 2 (MPA 60 mg), 2 tumors (14%) were lobular and 12 were ductal adenocarcinomas (86%) (Group 1 vs Group 2: $p < 0.05$), whereas in Group 3 (MPA 160 mg), 8 were lobular carcinomas (32%) and 17 were ductal carcinomas (68%). In syngeneic passages all lobular tumors behaved as progestin independent (PI) and ductal tumors as progestin dependent (PD). All ductal tumors , except one, expressed estrogen receptors (ER) and progesterone receptors (PR), whereas receptor expression was variable in lobular carcinomas. It can be concluded that Pg induces mostly lobular, PI mammary tumors in BALB/c female mice. The fact that most MPA-induced tumors are ductal and PD suggests that the two hormones use different carcinogenic pathways.
Record Date Created: 19940414

21/7/13 (Item 13 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

06285011 87130787 PMID: 3815380
Growth inhibition by progestins in a human endometrial cancer cell line with estrogen-independent progesterone receptors.
Terakawa N; Hayashida M; Shimizu I; Ikegami H; Wakimoto H; Aono T; Tanizawa O; Matsumoto K; Nishida M
Cancer research (UNITED STATES) Apr 1 1987, 47 (7) p1918-23, ISSN 0008-5472 Journal Code: CNF
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
The presence of estrogen-independent progesterone receptors (PgR) was demonstrated in a subline of a human endometrial cancer cell line, Ishikawa cells, although the original Ishikawa cells contained estrogen-inducible PgR. Scatchard plot analysis of cytoplasmic binding data in our subline (IK-90) revealed a high affinity binding site for R5020 (Kd, 1.0 nM) with maximum binding sites of 158 fmol/mg protein. Competition experiments showed a binding specificity similar to that of typical PgR. By low-salt sucrose gradient centrifugation, radioactive 8S and 4S peaks were found. The addition of 1 microM progesterone in culture medium resulted in a rapid nuclear translocation of cytoplasmic PgR. In contrast to the original cells, estrogen receptors could not be detected in IK-90 cells, and an addition of 17 beta-estradiol (10 nM) to culture medium failed to increase PgR. Accumulation of glycogen in cytoplasm of IK-90 cells in response to R5020 (0.1-1 microM) was observed by periodic acid-Schiff staining. The addition of R5020 to culture medium (0.1-1 microM) also caused a marked decrease in the growth of IK-90 cells, whereas the other steroids including 17 beta-estradiol, tamoxifen, testosterone, and cortisol had no significant effects. These results demonstrate for the first time the presence of a progestin -responsive human endometrial cancer cell line that contains estrogen- independent functional PgR. IK-90 cells appear to be an ideal model for studying the mechanism of the antiproliferative effect of progestin on endometrial cancer cells.
Record Date Created: 19870422

21/7/14 (Item 14 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

06020307 88152823 PMID: 2894344
Deletion proximal to DXS68 locus (L1 probe site) in a boy with Duchenne muscular dystrophy, glycerol kinase deficiency, and adrenal hypoplasia.
Chelly J; Marlhens F; Dutrillaux B; Van Ommen GJ; Lambert M; Haioun B; Boissinot G; Fardeau M; Kaplan JC
Inserm U. 129, Institut de Pathologie Moleculaire, CHU Cochin, Paris, France.
Human genetics (GERMANY, WEST) Mar 1988, 78 (3) p222-7, ISSN 0340-6717 Journal Code: GED
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
We report a case of a boy with Duchenne muscular dystrophy (DMD) associated with GK deficiency (GK), congenital adrenal hypoplasia (AHC), and mental retardation. Cytogenetic analysis of prometaphasic chromosomes revealed an interstitial chromosome deletion at Xp21.2 possibly extending to Xp21.1 or Xp21.3. His phenotypically normal mother was heterozygous for this deletion. DNA probe analysis on Southern blots showed that the deletion affected the following probe sites: 754, pERT 84, 21A, XJ2.3, pERT

87, JBir, and J66-H1 , whereas L1, C7 , and CX5.4 probes gave a normal signal. Pulse field gel electrophoresis after SfiI digestion did not show abnormal fragments with L1. These data are consistent with a deletion of about 4 megabases and indicate that the GK and AHC loci are proximal to L1 and distal to J66-H1.
Record Date Created: 19880418

21/7/15 (Item 15 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

05701970 88207465 PMID: 2966586
Steroid receptors and clinical outcome in patients with adenocarcinoma of the endometrium.
Ehrlich CE; Young PC; Stehman FB; Sutton GP; Alford WM
Department of Obstetrics and Gynecology, Indiana University Medical Center, Indianapolis.
American journal of obstetrics and gynecology (UNITED STATES) Apr 1988, 158 (4) p796-807, ISSN 0002-9378 Journal Code: 3NI
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
Progesterone receptor content was measured in tissue samples from 175 patients with endometrial adenocarcinoma by use of the dextran-charcoal method. The estradiol receptor content was determined in 138 of these samples. Ninety-two tumors (52.6%) tested positive for progesterone receptors (greater than 50 fmol/mg cytosol protein) and 111 (80.4%) tested positive for estradiol receptors (greater than 6 fmol/mg). Median follow-up was 27.3 months (range 1 to 152 months). Progesterone receptor status correlated significantly with grade, histology, adnexal spread, age, and recurrence rate in stage I cancer. There was no correlation between progesterone receptor status and clinical stage, myometrial invasion, peritoneal cytology, retroperitoneal lymph node involvement, or spread to the cervix. Estradiol receptor status correlated with adnexal spread and recurrence rate. Recurrence in patients with stage I disease was significantly more common if tumors were negative for progesterone receptor (16 of 43, 37.2%) than if they were positive (four of 57, 7%; p less than 0.001). Recurrence was also more common if tumors were negative for estradiol receptor (seven of 17, 41.2%) than if they were positive (eight of 63, 12.7%; p = 0.02). In recurrent or advanced disease, response to progestin was independent of estradiol receptor content, but tumors positive for progesterone receptors responded significantly more often than those lacking progesterone receptors. Overall survival was superior for patients with progesterone receptor-positive tumors (p = 0.001). Although survival in clinical stages I and II was also superior in patients with lesions positive for progesterone receptors (p = 0.13), there was no statistical difference in survival between patients with progesterone receptor-positive or -negative cancers and surgical stages I and II disease (p = 0.12). Estradiol receptor status had no apparent correlation with survival.
Record Date Created: 19880607

21/7/16 (Item 16 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

05238255 88291014 PMID: 3261050

Splenocyte natural killer cell activity and metastatic potential are inversely dependent on estrous stage.

Gruber SA; Hoffman RA; Sothern RB; Lakatua D; Carlson A; Simmons RL; Hrushesky WJ

Department of Surgery, University of Minnesota, Minneapolis.

Surgery (UNITED STATES) Aug 1988, 104 (2) p398-403, ISSN 0039-6060 Journal Code: VC3

Contract/Grant No.: RO1 CA 31635, CA, NCI

Languages: ENGLISH

Document type: Journal Article

Record type: Completed

We have previously shown that the timing of surgical removal of an estrogen -receptor -bearing mammary adenocarcinoma within the estrous cycle of the female C3HeB/FeJ mouse profoundly influences the frequency of subsequent tumor cell metastasis. In order to investigate the role of the immune response in this phenomenon, we measured splenic natural killer (NK) cell activity and interleukin-2 (IL-2) production in 80 female cycling mice, 16 to 18 weeks old, assigned to one of four estrous stages as determined by relative quantity of vaginal cellularity; proestrus, estrus, metestrus, and diestrus. After prolonged synchronization on 12-hours-on, 12-hours-off light-dark circadian schedules, daily vaginal smears were obtained for 2 weeks to characterize estrous cycling. On the day the animals were killed, vaginal smears were performed and single-cell suspensions were prepared from the harvested spleens. Direct cytotoxicity of spleen cells against the YAC tumor target was assessed immediately in a 3 1/2 hour 51Cr release assay and expressed as NK activity in lytic units (LU 20%). IL-2 production was determined in a bioassay with the IL-2-dependent CTLL-2 cell line. Significant differences in NK activity among estrous stages mimicking the variation found in frequency of surgical cure from mammary adenocarcinoma were observed ($p = 0.035$; one-way analysis of variance), with the time of lowest metastatic potential corresponding precisely with the time of highest splenocyte NK activity. These both occurred during the proestrus and estrus stages, characterized by high fertility, ovulation, and peak FSH, LH, and estrogen concentrations. In addition, NK activity was found to correlate significantly with IL-2 production ($r = 0.4$, $p$ less than 0.0005). These results indicate that important components of the cellular immune response to cancer vary rhythmically with hormonal changes in the host and may represent one of the factors affecting the delicate balance between host and tumor that alters the frequency of postsurgical metastatic dissemination.

Record Date Created: 19880902

21/7/17 (Item 17 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

05112902 86321827 PMID: 3463244

Phenotypic change of the transplantable MXT mammary adenocarcinoma into mixed bone producing sarcoma-like tumors.

Kiss R; Devleeschouwer N; Paridaens RJ; Danguy A; Heuson JC; Atassi G

Anticancer research (GREECE) Jul-Aug 1986, 6 (4) p753-9, ISSN 0250-7005 Journal Code: 59L

Languages: ENGLISH

Document type: Journal Article

Record type: Completed

The B6D2F1 mouse mammary adenocarcinoma was adapted to grow in vitro as monolayer. After in vitro passaging of tumor cells, phenotypic

changes occurred that were expressed in vivo. Following intraperitoneal inoculation of tumor cells, bone-forming tumors developed. These tumors consisted of undifferentiated adenocarcinoma mixed with large amount of cartilagenous and osseous tissue. The etiology of these phenotypic changes was not yet determined. However, hypothesis of the possible origin of the cartilage and bone forming tissue was formulated. The biologic characterization of the intraperitoneally bone-forming tumor was achieved and the experimental conditions to preserve and induce the reproducible sarcoma-like bone forming tumors were defined. Our data support the usefulness of this new original model for fundamental research as well as for screening of anticancer drugs.
Record Date Created: 19861010

21/7/18 (Item 18 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

05026653 86250239 PMID: 3721931
Influence of irradiation of a primary tumor on the labeling index and estrogen receptor index in a distant tumor focus.
Fisher B; Saffer EA; Deutsch M
International journal of radiation oncology, biology, physics (UNITED STATES) Jun 1986, 12 (6) p879-85, ISSN 0360-3016 Journal Code: G97
Contract/Grant No.: CA-14972, CA, NCI
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
The present investigation reaffirms our observation that removal of a C3H mouse mammary adenocarcinoma results in a perturbation of tumor cells in a metastatic focus. An increase occurs in the proportion of cells undergoing DNA synthesis (labeling index, LI), and a decrease occurs in the proportion demonstrating estrogen receptor (ER index; ERI). The changes are transient but of sufficient duration and magnitude to produce an increase in the size of a distant tumor. This study was conducted to determine whether cytoreduction of a primary tumor by irradiation would produce a similar change in metastatic tumor cells and whether preoperative radiation would obtund the effect of primary tumor removal. The administration of a maximum tolerated dose of radiation (50 Gy) to a primary tumor produced a significant (p less than 0.001) increase in LI and decrease in ERI of a lesser magnitude than that observed following surgical removal of the primary tumor, but still sufficient to enhance the growth of a metastatic focus. Whereas, there was almost a 50% increase in LI in a metastasis 1 and 3 days following removal of a primary tumor the increase was only 13% three days after radiation. There was a 20% decrease in ERI 3 days following radiation and a 37% decrease at that time following tumor removal. Preoperative irradiation of a primary tumor 1, 3, or 5 days prior to tumor removal, obtunds the increase in LI and decrease in ERI following operation. Radiation the day before surgery was most effective because the changes in a distant focus occurring as a result of the radiation and of the surgery were prevented. The clinical relevance of these observations deserves further consideration.
Record Date Created: 19860818

21/7/19 (Item 19 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

04950679 85269032 PMID: 4022502
Histopathologic correlations of estrogen and progestin receptor protein in epithelial ovarian carcinomas.
Schwartz PE; Merino MJ; Livolsi VA; Lawrence R; MacLusky N; Eisenfeld A
Obstetrics and gynecology (UNITED STATES) Sep 1985, 66 (3) p428-33, ISSN 0029-7844 Journal Code: OC2
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
One hundred thirteen primary epithelial ovarian cancers were analyzed for estrogen and progestin receptor content and the results compared with multiple histologic parameters (grade, necrosis, fibrosis, lymphocyte infiltration, mitoses, tumor giant cells, psammoma bodies, stroma). Grade 4 cancers had a statistically greater likelihood of containing estrogen receptors (P = .03) than did lower grade cancers. However, grade 3 tumor samples containing abundant (3+ and 4+) mitoses had a significantly greater number of estrogen receptor negative cancers (P = .01) than did cancers containing none to moderate (0-2+) mitoses. The only histologic parameter that demonstrated any statistically significant association with progestin receptor content was the presence of lymphocyte infiltration. Samples demonstrating moderate (2+ and 3+) lymphocyte infiltration had a significantly (P = .005) greater chance of being progestin receptor negative than cancers containing none to minimal (0 to 1+) lymphocyte infiltration. This study suggests that estrogen and progestin receptor content of epithelial ovarian cancers is associated with grade and mitoses (estrogen receptor) and lymphocyte infiltration (progestin receptor). With the exception of these relationships, the estrogen and progestin receptor content of ovarian cancers appears independent of all of the histologic parameters examined.
Record Date Created: 19850925

21/7/20 (Item 20 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

04908704 84259069 PMID: 6331648
Epidermal growth factor binding by breast tumor biopsies and relationship to estrogen receptor and progestin receptor levels.
Fitzpatrick SL; Brightwell J; Wittliff JL; Barrows GH; Schultz GS
Cancer research (UNITED STATES) Aug 1984, 44 (8) p3448-53, ISSN 0008-5472 Journal Code: CNF
Contract/Grant No.: CA 31895, CA, NCI; CA-19657, CA, NCI
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
Epidermal growth factor (EGF) may be important in regulating the growth of some breast cancer cells in vivo because of its mitogenic action on some breast cancer cell lines in vitro. Epidermal growth factor receptors (EGF-R) were measured in a series of breast tumors to determine what percentage of breast tumors express EGF-R and whether EGF-R was independent of expression of estrogen receptor and progestin receptor. Specific binding of 125I-EGF to membranes from pooled homogenates of breast tumors reached equilibrium after 45 min at 25 degrees and remained constant. Scatchard analysis of 125I-EGF binding indicated a single class of receptors with an apparent Kd of 2 nM and a binding capacity of 28 fmol/mg of membrane protein, and the binding of 125I-EGF was not effectively competed for by insulin, fibroblast growth factor, growth hormone, or prolactin. Specific

binding of 125I-EGF of 1 fmol or greater/mg of membrane protein and 15% or greater specific binding was detected in 48% of 137 unselected primary and metastatic breast tumors. The frequency distribution of EGF binding values was unimodal, with a progressive decrease in the proportion of patients with high EGF binding values. The values of EGF binding ranged from 1 to 121 fmol/mg of protein, with an arithmetic mean of 8.4 fmol/mg of protein and a geometric mean of 3.2 fmol/mg of protein. Forty-two % of 24 metastatic breast tumors were positive for EGF binding, with an arithmetic mean of 6.3 fmol/mg of protein and a geometric mean of 4.1 fmol/mg of protein. The magnitude of EGF binding in individual tumors was independent of either estrogen receptor or progestin receptor levels, although the highest quantities of EGF binding were expressed by tumors lacking steroid receptors. Approximately 20% of the tumors in the study were EGF-R-positive and ER-negative, suggesting that the growth of these tumors may be regulated predominantly by a peptide hormone (EGF) rather than a steroid hormone (estrogen). EGF binding did not correlate significantly with age of the patients. Correlation analysis between EGF binding and the percentage of malignant and nonmalignant cell types present in sections of tumor adjacent to the area assayed for EGF binding indicated that the percentage of malignant cells is an important factor in determining the amount of EGF binding in tumor homogenates. The recent discovery of transforming growth factors which interact with the EGF-receptor system suggests additional roles for EGF receptors in breast cancer.

Record Date Created: 19840829

21/7/21 (Item 21 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

04653005 83155343 PMID: 6403233

Increased DNA binding of the estrogen receptor in an estrogen -resistant mammary cancer.

Baskevitch PP; Vignon F; Bousquet C; Rochefort H

Cancer research (UNITED STATES) May 1983, 43 (5) p2290-7, ISSN 0008-5472 Journal Code: CNF

Languages: ENGLISH

Document type: Journal Article

Record type: Completed

In the C3H mouse mammary adenocarcinoma , estradiol cannot induce the progesterone receptor , and the tumor growth rate is not decreased by ovariectomy. To find an explanation for this estrogen resistance, we have compared the estrogen receptor (ER) from this tumor to the ER of uterus and of the mammary tumors induced in rats by dimethylbenz(a)anthracene. Since the ER concentration of the C3H tumor is low (congruent to 20 fmol/mg protein), we have used iodoestradiol of high specific activity to label the receptor. Several criteria of ER activation were studied. The dissociation rates of estradiol with or without sodium molybdate were similar in all tissues. In metrizamide isopycnic gradients, ER from rat uterus and C3H tumor had a similar density, both in the presence or absence of DNA. The binding of ER to DNA-cellulose was analyzed by incubating to equilibrium a constant amount of ER with a variable amount of DNA, the cellulose concentration being kept constant. The saturation data were plotted according to the method of Scatchard. The apparent affinity for DNA of the cytosol ER was similar for the rat dimethylbenz(a)anthracene tumors and the uterus (Kd congruent to 10 microM) but was significantly higher for the C3H tumor ER (Kd congruent to 2.3

microM). Neither the substitution of estradiol by iodoestradiol, nor the difference in cytosol protein and ER concentrations, nor the nonspecific steroid binding to DNA-cellulose could explain this result. This difference was confirmed when using DNA-agarose or soluble DNA in sucrose gradients. Finally, the salt concentrations necessary to elute ER from DNA-cellulose columns were 0.20 and 0.28 M for uterine and C3H tumor ER, respectively. To conclude, the C3H tumor has a low content of ER which appears to have a higher affinity for DNA than the ER of estrogen-responsive tissue. We suggest that the reason for the inefficiency of ER in the C3H tumor may be related to its increased affinity for nonspecific DNA sites.
Record Date Created: 19830527

21/7/22 (Item 22 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

04044271 86003033 PMID: 6085722
Studies of mammary carcinoma metastasis in a mouse model system. I: Derivation and characterization of cells with different metastatic properties during tumour progression in vivo.
Barnett SC; Eccles SA
Clinical & experimental metastasis (ENGLAND) Jan-Mar 1984, 2 (1) p15-36, ISSN 0262-0898 Journal Code: DFC
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
The biological and metastatic properties of cells from a murine mammary adenocarcinoma , MT1, were studied during serial transplantation in syngeneic hosts. Over 35 generations the tumour progressed from a well-differentiated, poorly metastatic neoplasm to an anaplastic highly metastatic state. At early passages the tumour yielded uniform cultures of cuboidal epithelial cells, at passage 17 both epitheloid and spindle type cells were present, and by passage 30 only spindle type cells were obtained. Epithelioid cell lines and clones when injected intravenously into syngeneic hosts produced lung colonies only, whereas spindle cell lines were capable of extensive extrapulmonary colonisation. Similar patterns of dissemination and growth were seen in spontaneous metastasis assays. In spite of the marked phenotypic differences in these 'subpopulations', their comparable ultrastructural features, oestrogen receptor levels, expression of MMTV antigens, DNA content and lectin binding profiles suggested a common cell lineage. It is proposed that these cell lines will be of use in the determination of tumour and host factors influencing tumour progression and the evolution of metastatic potential.
Record Date Created: 19851112

21/7/23 (Item 1 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)


13082239 BIOSIS NO.: 200100289388
Transactivation specificity of glucocorticoid vs. progesterone receptors : Role of functionally different interactions with transcription factors.
AUTHOR: Song Liang-Nian(a); Rusconi Sandro; Simons S Stoney Jr(a)
AUTHOR ADDRESS: (a)NIDDK, NIH, Bldg. 8, Room B2A-11, Bethesda, MD, 20892-0805**USA
JOURNAL: FASEB Journal 15 (4):pA527 March 7, 2001

MEDIUM: print
CONFERENCE/MEETING: Annual Meeting of the Federation of American Societies for Experimental Biology on Experimental Biology 2001 Orlando, Florida, USA March 31-April 04, 2001
ISSN: 0892-6638
RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English

ABSTRACT: A major unanswered question of glucocorticoid and progesterone action is how different whole cell hormonal responses can arise when both of the cognate receptors bind to, and activate, the same hormone response elements (HREs). We have previously documented that the EC50 of agonist complexes, and partial agonist activity of antagonist complexes, of glucocorticoid receptors (GRs) are modulated by the glucocorticoid modulatory element (GME). Similarly, the activities of GR and of progesterone receptors (PRs) are modified by increased amounts of homologous receptor and of coregulators. We have used a line of mouse mammary adenocarcinoma (1470.2) cells to test the hypothesis that these components differentially alter GR and PRs transcriptional properties. To remove possible cell-specific differences, we have examined both receptors in the same cells. In order to segregate the responses that might be due to unequal nucleosome reorganization from those reflecting interactions with other components, we chose a transiently transfected template containing a simple glucocorticoid response element, or GRE (i.e., GREtkLuc). No significant differences were found with elevated levels of each receptor. Quantitative differences were observed with GME and SMRT that were large enough to significantly alter the sensitivity of gene induction. The responses to the added corepressors SMRT and NCoR were opposite for GR and PR. Studies with chimeric GR/PR receptors indicated that no one segment of PR or GR is responsible for these differences and that the composite response likely involves interactions between the N- and C-termini of receptors. Collectively, the data suggest that differences between GR and PR induction in a given cell can be controlled, in part, by unequal responses to assorted nuclear transcriptional cofactors.

21/7/24 (Item 2 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)


06286318 BIOSIS NO.: 000086120501
EFFECTS OF RECURRENT SELECTION IN CORN POPULATIONS
AUTHOR: RODRIGUEZ O A; HALLAUER A R
AUTHOR ADDRESS: DEP. AGRON., IOWA STATE UNIV., AMES, IOWA 50011.
JOURNAL: CROP SCI 28 (5). 1988. 796-800. 1988
FULL JOURNAL NAME: Crop Science
CODEN: CRPSA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: Recurrent selection methods were conducted in corn (Zea mays L.) populations to increase the frequency of favorable alleles for grain yield. Populations under recurrent selection were evaluated to estimate response to selection and to compare the relative effectiveness of the different methods of recurrent selection for grain yield improvement. Ten

populations, their improved strains, and the S1 generation of the original and improved strains were evaluated in four field environments. This study was conducted to estimate the direct and indirect responses to selection of the 10 populations and their respective S1 generations for different methods of selection. Positive response to selection for greater grain yield was realized for each selection method except for one population (BSCB1) undergoing reciprocal recurrent selection. Average response (0.249 Mg ha-1 cycle-1) for the intrapopulation selection methods was greater than the average response (0.033 Mg ha-1 cycle-1) for the interpopulation selection methods. Response in the S1 generations was similar to the response of the noninbred populations. Reduction in inbreeding depression averaged 12%. The S1 generations of two selected populations [BS13(S)C4 and BS12(HI )C7 ] had significantly greater yields than the nonselected, noninbred populations from which the selected populations were derived. Positive response to selection was accomplished without selection for taller, later-maturity genotypes. No consistent trends were detected for changes in root and stalk lodging with selection for grain yield.

21/7/25 (Item 3 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)


05324618 BIOSIS NO.: 000032047747
ETIOLOGY OF MAMMARY TUMORS INDUCED IN ICRC MICE BEARING SYNGENEIC RENAL GRAFTS OF THYMUS GLAND
AUTHOR: PAI S R
AUTHOR ADDRESS: CANCER RES. INST., TATA MEMORIAL CENT., PAREL, BOMBAY-400012, INDIA.
JOURNAL: UICC (UNION INTERNATIONALE CONTRE LE CANCER, INTERNATIONAL UNION AGAINST CANCER). 14TH INTERNATIONAL CANCER CONGRESS, BUDAPEST, HUNGARY, AUG. 21-27, 1986. ABSTRACTS, LECTURES, SYMPOSIA AND FREE COMMUNICATIONS, VOLS. 1, 2, 3, LATE ABSTRACTS, AND REGISTER. XVI+479P.(VOL. 1); XVI+298P.(VOL. 2); XVI+531P.(VOL. 3); 15P.(LATE ABSTRACTS); 40P.(REGISTER) S. KARGER AG: BASEL, SWITZERLAND; NEW YORK, N.Y., USA; AKADEMIAI KIADO: BUDAPEST, HUNGARY. PAPER. ISBN 3-8055-4434-0(KARGER); ISBN 963-05-4422-9(VOL. 1); ISBN 963-05-4423-7(VOL. 2); ISBN 963-05-4424-5(VOL. 3); ISBN 963-05-4439-3(LATE ABSTRACTS); ISBN 963-05-4425-3(REGISTER); ISBN 963-05-4421-0(GENERAL). 0 (0). 1986. 1153. 1986
CODEN: 24789
DOCUMENT TYPE: Meeting
RECORD TYPE: Citation
LANGUAGE: ENGLISH

21/7/26 (Item 1 from file: 73)
DIALOG(R)File 73:EMBASE


06073528 EMBASE No: 1995104005
Correlation of TGF-betainf 1 expression with medroxiprogesterone acetate responsiveness in mouse mammary adenocarcinomas
Elizalde P.V.; Guerra F.K.; Gravano M.; Lanari C. ; Lippman M.E.; Charreau E.H.; Lupu R.
Instituto de Biologia, Medicina Experimental (IBYME), Obligado 2490,Buenos Aires 1428 Argentina

Cancer Investigation ( CANCER INVEST. ) (United States) 1995, 13/2 (173-180)
CODEN: CINVD ISSN: 0735-7907
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

We investigated the expression of transforming growth factors betainf 1 and alpha (TGF-betainf 1, TGF-alpha) in hormone-responsive (MPA-R) and unresponsive MPA-U) tumor lines obtained from medroxyprogesterone acetate (MPA)-induced mammary adenocarcinomas in BALB/c mice. The tumors were transplanted into MPA-treated and untreated mice. TGF-betainf 1 gene expression was observed in the MPA-R lines growing in untreated animals, but not in MPA-treated mice. TGF-betainf 1 mRNA was not detected in the MPA-U tumor lines growing in either MPA-treated or untreated animals. In MPA-R lines the levels of TGF-betainf 1 expression were inversely correlated to growth rate. High-affinity TGF-betainf 1 receptors were present in the MPA-R tumors. These results suggest that one of the mechanisms by which MPA exerts its proliferative effect on MPA-R tumor lines is inhibition of the expression of TGF-betainf 1. Thus, the lack of expression of TGF-betainf 1 in MPA-U tumors may be related to the acquisition of autonomous growth.

21/7/27 (Item 1 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)


135255304 CA: 135(18)255304a JOURNAL
Development of mammary adenocarcinomas by tissue-specific knockout of Brca2 in mice
AUTHOR(S): Ludwig, Thomas; Fisher, Peter; Murty, Vundavalli; Efstratiadis, Argiris
LOCATION: Department of Anatomy and Cell Biology, Columbia University, New York, NY, 10032, USA
JOURNAL: Oncogene DATE: 2001 VOLUME: 20 NUMBER: 30 PAGES: 3937-3948
CODEN: ONCNES ISSN: 0950-9232 LANGUAGE: English PUBLISHER: Nature Publishing Group
SECTION:
CA214001 Mammalian Pathological Biochemistry
CA203XXX Biochemical Genetics
IDENTIFIERS: gene Brca2 knockout mouse model mammary tumorigenesis
DESCRIPTORS:
Mammary gland...
adenocarcinoma; gene Brca2 knockout mouse as model for mammary tumorigenesis
Gene,animal... Transcription factors...
BRCA2; gene Brca2 knockout mouse as model for mammary tumorigenesis
Genetic element...
CRE (cAMP-responsive element); gene Brca2 knockout mouse as model for mammary tumorigenesis
Ploidy...
diploidy; gene Brca2 knockout mouse as model for mammary tumorigenesis
Cyclins...
D1; gene Brca2 knockout mouse as model for mammary tumorigenesis
Alleles... Disease models... Estrogen receptors... Mouse... p53(protein)...
gene Brca2 knockout mouse as model for mammary tumorigenesis
Mutation...

gene Brca2; gene Brca2 knockout mouse as model for mammary tumorigenesis
Genetic element...
loxP; gene Brca2 knockout mouse as model for mammary tumorigenesis
Mammary gland...
neoplasm; gene Brca2 knockout mouse as model for mammary tumorigenesis
Cyclin dependent kinase inhibitors...
p21CIP1/WAF1; gene Brca2 knockout mouse as model for mammary tumorigenesis
Gene,animal...
TP53; gene Brca2 knockout mouse as model for mammary tumorigenesis

21/7/28 (Item 2 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)


130180830 CA: 130(14)180830e JOURNAL
Involvement of insulin-like growth factors-I and -II and their receptors in medroxyprogesterone acetate-induced growth of mouse mammary adenocarcinomas
AUTHOR(S): Elizalde, Patricia V.; Lanari, Claudia; Molinolo, Alfredo A.; Guerra, Fabiana K.; Balana, Maria E.; Simian, Marina; Iribarren, Adolfo M.; Charreau, Eduardo H.
LOCATION: Instituto de Biologia y Medicina Experimental (IBYME), 1428, Buenos Aires, Argent.
JOURNAL: J. Steroid Biochem. Mol. Biol. DATE: 1998 VOLUME: 67 NUMBER: 4 PAGES: 305-317 CODEN: JSBBEZ ISSN: 0960-0760 LANGUAGE: English
PUBLISHER: Elsevier Science Ltd.
SECTION:
CA214001 Mammalian Pathological Biochemistry
CA202XXX Mammalian Hormones
IDENTIFIERS: IGF medroxyprogesterone mediated mammary adenocarcinoma growth, receptor IGF medroxyprogesterone mediated mammary adenocarcinoma growth
DESCRIPTORS:
Mammary epithelium...
IGF-I and IGF-II expression in malignant epithelial cells of mouse mammary adenocarcinomas
Breast adenocarcinoma... Insulin-like growth factor I receptors...
Insulin-like growth factor II receptors...
involvement of IGF-I and IGF-II and their receptors in medroxyprogesterone acetate-induced growth of mouse mammary adenocarcinomas
CAS REGISTRY NUMBERS:
71-58-9 67763-96-6 67763-97-7 involvement of IGF-I and IGF-II and their receptors in medroxyprogesterone acetate-induced growth of mouse mammary adenocarcinomas

21/7/29 (Item 3 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)


119063875 CA: 119(7)63875k CONFERENCE PROCEEDING
Growth factors in murine mammary adenocarcinomas induced by progestins
AUTHOR(S): Charreau, Eduardo H.; Elizalde, Patricia; Guerra, Fabiana;

Lanari, Claudia; Kordon, Edith; Pasqualini, Christiane Dosne
LOCATION: Inst. Biol. Med. Exp., Buenos Aires, Argent.
JOURNAL: Horm. Carcinog., Proc. Int. Symp., 1st EDITOR: Li, Jonathan J. (Ed), Nandi, Satyabrata (Ed), Li, Sara Antonia (Ed), DATE: 1992 PAGES: 138-44 CODEN: 58ZSAS LANGUAGE: English MEETING DATE: 910000 PUBLISHER: Springer,New York, N. Y
SECTION:
CA202010 Mammalian Hormones
IDENTIFIERS: progestin mammary adenocarcinoma growth factor
DESCRIPTORS:
Progestogens...
mammary adenocarcinoma induction by, growth factors role in
Animal growth regulators...
mammary adenocarcinoma induction by progestins in relation to
Mammary gland,neoplasm, adenocarcinoma...
progestin-induced, growth factors role in

21/7/30 (Item 4 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)


113038278 CA: 113(5)38278m JOURNAL
Estradiol dependence of the specific mammary tissue targeting of polyoma virus oncogenicity in nude mice
AUTHOR(S): Berebbi, M.; Martin, P. M.; Berthois, Y.; Bernard, A. M.; Blangy, D.
LOCATION: CNRS, 13009, Marseille, Fr.
JOURNAL: Oncogene DATE: 1990 VOLUME: 5 NUMBER: 4 PAGES: 505-9
CODEN: ONCNES ISSN: 0950-9232 LANGUAGE: English
SECTION:
CA214001 Mammalian Pathological Biochemistry
IDENTIFIERS: estradiol breast adenocarcinoma induction polyoma virus
DESCRIPTORS:
Virus,animal, polyoma-...
adenocarcinoma of breast induced by, estradiol dependency of, in mouse model, estradiol-independent tumor growth in relation to
Receptors...
for estradiol and progesterone, of adenocarcinoma cells of breast, in mouse model, estradiol-dependent tumor induction and estradiol-independent tumor growth in relation to
Mouse...
polyoma virus induction of breast adenocarcinoma in, estradiol dependency of, estradiol-independent tumor growth in relation to
Mammary gland,neoplasm, adenocarcinoma...
polyoma virus induction of, estradiol dependency of, in mouse model, estradiol-independent tumor growth in relation to
Carcinoma,adeno-...
polyoma virus induction of, estradiol dependency of, of breast, in mouse model, estradiol-independent tumor growth in relation to
CAS REGISTRY NUMBERS:
50-28-2 57-83-0 biological studies, receptors for, of adenocarcinoma cells of breast, in mouse model, estradiol-dependent tumor induction and estradiol-independent growth in relation to

21/7/31 (Item 1 from file: 351)

DIALOG(R)File 351:Derwent WPI


000690441
WPI Acc No: 1970-27174R/197016
Adamantane derivs with beta-adrenergic blocking and - local anaesthetic activity
Patent Assignee: SOC D'ETUDES DE RECHERCHE (SODM )
Number of Countries: 006 Number of Patents: 007
Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week | |
|---|---|---|---|---|---|---|---|
| BE 740388 | A | | | | | 197016 | B |
| DE 1952874 | A | | | | | 197019 | |
| FR 2021124 | A | | | | | 197045 | |
| GB 1274200 | A | | | | | 197220 | |
| US 3663617 | A | | | | | 197223 | |
| JP 72042259 | B | | | | | 197243 | |
| US 3748346 | A | | | | | 197333 | |

Priority Applications (No Type Date): GB 6849917 A 19681021

Abstract (Basic): BE 740388 A

Adamantane derivs with beta-adrenergic blocking and local anaesthetic activity. M3A. are new cpds. of formula: primary or sec. amino with one or two alkyl (C1-C8) opt. unsatd. or one R1 may be cycloalkyl (C4-C7 ) the other being Hi or R1 and R2 with the N atom may form a N-heterocyclic ring opt. containing an O atom or another N-atoms). including acid addition salts of (I).

Activity as sympathicolytic, myelitic, analgesic and esp. local anaesthetic and beta-adrenergic blocking agents which are stable to light and heat.

Preparation by: British Priority application is in name of Centre de Recherchus Marcel Midy

Derwent Class: B05
?logoff hold

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show files
File 155:MEDLINE(R) 1966-2001/Dec W5
File   5:Biosis Previews(R) 1969-2001/Nov W4
         (c) 2001 BIOSIS
File 315:ChemEng & Biotec Abs 1970-2001/Oct
         (c) 2001 DECHEMA
File  73:EMBASE 1974-2001/Nov W4
         (c) 2001 Elsevier Science B.V.
File 399:CA SEARCH(R) 1967-2001/UD=13522
         (c) 2001 AMERICAN CHEMICAL SOCIETY
File 351:Derwent WPI 1963-2001/UD,UM &UP=200170
         (c) 2001 Derwent Info Ltd
?ds

Set     Items   Description
S1    1617209   MURINE OR MOUSE
S2         33   PROGESTIN(3N)INDEPENDENT(5N) (TUMOR? ? OR TUMOUR? ? OR CAN-
              CER? ? OR CARCINOMA? ?)
S3     153015   MAMMARY
S4     191156   ADENOCARCINOMA? ?
S5      75953   ESTROGEN(3N) RECEPTOR? ?
S6      37485   PROGESTERONE (3N) RECEPTOR? ?
S7          8   C7(3N)HI OR C7(3N)H1
S8         11   RD S2 (unique items)
S9          4   RD S7 (unique items)
S10         3   MC7(3N)L1
S11         1   RD S10 (unique items)
S12      1855   S1(5N) S3 (5N) S4
S13        23   S12 AND S5
S14        20   S12 AND S6
S15        11   RD S13 (unique items)
S16        10   RD S14 (unique items)
S17        28   S8 OR S9 OR S11 OR S15 OR S16
S18      2442   AU=LANARI? OR AU=MOLINOLO? OR AU=LUTHY?
S19        17   S12 AND S18
S20         6   RD S19 (unique items)
S21        31   S17 OR S20
?t 21/7/all

 21/7/1     (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

11533862   21326139   PMID: 11333273
  Transactivation specificity of glucocorticoid versus progesterone
 receptors . Role of functionally different interactions of transcription
factors with amino- and carboxyl-terminal receptor domains.
  Song LN; Huse B; Rusconi S; Simons SS
  Steroid Hormones Section, NIDDK/LMCB, National Institutes of Health,
Bethesda, MD 20892, USA.
  Journal of biological chemistry (United States) Jul 6 2001, 276 (27)
 p24806-16, ISSN 0021-9258 Journal Code: HIV
  Languages: ENGLISH
  Document type: Journal Article
  Record type: Completed
  A major unanswered question of glucocorticoid and progesterone action is
how different whole cell responses arise when both of the cognate receptors
can bind to, and activate, the same hormone response elements. We have
```

documented previously that the EC(50) of agonist complexes, and the partial agonist activity of antagonist complexes, of both glucocorticoid receptors (GRs) and progesterone receptors (PRs) are modulated by increased amounts of homologous receptor and of coregulators. We now ask whether these components can differentially alter GR and PR transcriptional properties. To remove possible cell-specific differences, we have examined both receptors in the common environment of a line of mouse mammary adenocarcinoma (1470.2) cells. In order to segregate the responses that might be due to unequal nucleosome reorganization by the two receptors from those reflecting interactions with other components, we chose a transiently transfected reporter containing a simple glucocorticoid response element (i.e. GREtkLUC). No significant differences are found with elevated levels of either receptor. However, major, qualitative differences are seen with the corepressors SMRT and NCoR, which afford opposite responses with GR and PR. Studies with chimeric GR/PR receptors indicate that no one segment of PR or GR is responsible for these properties and that the composite response likely involves interactions with both the amino and carboxyl termini of receptors. Collectively, the data suggest that GR and PR induction of responsive genes in a given cell can be differentially controlled, in part, by unequal interactions of multiple receptor domains with assorted nuclear cofactors.

Record Date Created: 20010702

21/7/2 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

11150620 21179014 PMID: 11281653

Mechanisms of cell cycle arrest in response to tgf-beta in progestin -dependent and - independent growth of mammary tumors.

Salatino M; Labriola L; Schillaci R; Charreau EH; Elizalde PV

Instituto de Biologia y Medicina Experimental, Obligado 2490, Buenos Aires, 1428, Argentina

Experimental cell research (United States) Apr 15 2001, 265 (1) p152-66, ISSN 0014-4827 Journal Code: EPB

Languages: ENGLISH

Document type: Journal Article

Record type: In Process

TGF-beta1 modulation of cell cycle components was assessed in an experimental model in which the synthetic progestin medroxyprogesterone acetate (MPA) induced mammary tumors in Balb/c mice. TGF-beta1 inhibited both MPA-induced proliferation of progestin-dependent C4HD epithelial cells and proliferation of the progestin-independent variant cell type C4HI, arresting cells in G(1) phase of the cell cycle. Progestin-independent 60 epithelial cells evidenced reduced response to TGF-beta1 antiproliferative effects. TGF-beta1 inhibition of cyclins D1 and A expression and up-regulation of p21(CIP1) levels were the common findings in all three cell types. In addition, a significant content reduction of cyclin D1/cdk4 and cyclin A/cdk2 complexes was found after TGF-beta1 inhibition of MPA-dependent and -independent proliferation. TGF-beta1 inhibited cyclin D2 expression and up-regulated p27(KIP1) levels only when acting as inhibitor of MPA-induced proliferation of C4HD cells. Regulation of these two cell cycle components resulted in decreased cyclin D2/cdk2 complex and in increased p27(KIP1) association with cdk2 in C4HD cells treated with TGF-beta1. These two molecular mechanisms, unobserved in progestin-independent growth of C4HI or 60 cells, were associated with a significantly higher degree of inhibition of cdk2 kinase activity in C4HD

cells compared to that found in TGF-beta-treated C4HI or 60 cells. Reduced sensitivity of 60 cells to the growth-inhibitory effects of TGF-beta1 correlated with significantly lower levels of p15(INK4B), p21(CIP1), and p27(KIP1) expressed in these cells, compared to the levels present in C4HD or C4HI cells, and correlated as well with lack of expression of p16(INK4). Thus, common targets were found to exist in TGF-beta1 inhibitory action on breast cancer cells, but regulation of specific targets was found when TGF-beta1-inhibited proliferation driven by the progesterone receptor.

Record Date Created: 20010403

21/7/3 (Item 3 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

10930575 21036723 PMID: 11196177
Five novel hormone-responsive cell lines derived from murine mammary ductal carcinomas: in vivo and in vitro effects of estrogens and progestins.
Lanari C; Luthy I; Lamb CA; Fabris V; Pagano E; Helguero LA; Sanjuan N; Merani S; Molinolo AA
Instituto de Biologia y Medicina Erperimental, Consejo Nacional de Investigaciones Cientificas y Tecnicas, Buenos Aires, Argentina.
Cancer research (United States) Jan 1 2001, 61 (1) p293-302, ISSN 0008-5472 Journal Code: CNF
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
We have developed an experimental model of mammary carcinogenesis in which the administration of medroxyprogesterone acetate (MPA) to female BALB/c mice induces progestin-dependent ductal metastatic mammary tumors with high levels of estrogen receptor (ER) and progesterone receptor (PR). Through selective transplants in untreated mice, we have obtained progestin-independent variants, still expressing high levels of ER and PR. Primary cultures of the MPA-induced carcinomas C4-HD and C7 -HI were set up, and after 3-4 months, several different cell lines were obtained. Four of these, MC4-L1, MC4-L2, MC4-L3, and MC4-L5 were established from C4-HD and a fifth, MC7 - L1 , from C7 -HI . All cells were of epithelial origin, as demonstrated by electron microscopy and by immunocytochemical identification of cytokeratin and cadherin. In vitro MC4-L1, MC4-L3, and MC4-L5 showed a typical epithelial morphology; when transplanted in vivo, they originated metastatic carcinomas with different degrees of differentiation. MC4-L2 and MC7 - L1 deviated from the standard epithelial picture; they disclosed a spindle-shaped morphology in vitro and in vivo gave rise to a biphasic spindle cell/tubular carcinoma and an anaplastic carcinoma, respectively; both lines gave rise to metastases. This differential morphology correlated with a higher degree of aggressiveness, as compared with MC4-L1, MC4-L3, and MC4-L5. ERs and PRs were detected by binding, immunocytochemistry, and Western blot. In vitro, MC4-L2 and MC7 - L1 were stimulated by MPA (nM to microM) and 17beta-estradiol (nM and 10 nM); no significant stimulation was observed in MC4-L1, MC4-L3, and MC4-L5 under the same experimental conditions. In vivo, MPA significantly stimulated tumor growth in all epithelioid lines but not in MC4-L2 and MC7 - L1 . A progestin-dependent growth pattern was confirmed for MC4-L1, MC4-L3, and MC4-L5 in successive transplants, whereas MC4-L2 and MC7 - L1 behaved as progestin independent . This is the first description of mouse mammary carcinoma cell lines expressing ER and

PR. The different in vitro hormone responses as compared with in vivo and the differential effects of 17beta-estradiol in the parental tumors and in cell lines render these lines useful tools for the in vitro and in vivo study of hormone regulation of tumor growth and metastases.
Record Date Created: 20010119

21/7/4 (Item 4 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

10437200 20065105 PMID: 10597237
Interactions between progestins and heregulin (HRG) signaling pathways: HRG acts as mediator of progestins proliferative effects in mouse mammary adenocarcinomas.
Balana ME; Lupu R; Labriola L; Charreau EH; Elizalde PV
Instituto de Biologia y Medicina Experimental (IBYME), Buenos Aires, Argentina.
Oncogene (ENGLAND) Nov 4 1999, 18 (46) p6370-9, ISSN 0950-9232 Journal Code: ONC
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
The present study addressed links between progestin and heregulin (HRG) signaling pathways in mammary tumors. An experimental model of hormonal carcinogenesis, in which the synthetic progestin medroxyprogesterone acetate (MPA) induced mammary adenocarcinomas in female Balb/c mice, was used. MPA induced an in vivo up-regulation of HRG mRNA expression in progestin-dependent (HD) tumor lines. Mammary tumor progression to a progestin - independent (HI) phenotype was accompanied by a high constitutive expression of HRG. The HRG message arose from the tumor epithelial cells. Primary cultures of malignant epithelial cells from a HD tumor line were used to investigate HRG involvement on cell proliferation. HRG induced a potent proliferative effect on these cells and potentiated MPA mitogenic effects. Blocking endogenous HRG synthesis by antisense oligodeoxynucleotides (ASODNs) to HRG mRNA inhibited MPA-induced cell growth, indicating that HRG acts as a mediator of MPA-induced growth. High levels of ErbB-2 and ErbB-3 expression and low ErbB-4 levels were found in HD cells. Treatment of these cells with either MPA or HRG resulted in tyrosine phosphorylation of both ErbB-2 and ErbB-3. Furthermore, both HRG and MPA proliferative effects were abolished when cells were treated with ASODNs to ErbB-2 mRNA, providing evidence for a critical role of ErbB-2 in HRG-induced growth. Finally, blocking type I insulin-like growth factor receptor (IGF-IR) expression with ASODN resulted in the complete inhibition of HRG proliferative effect, demonstrating that a functional IGF-IR is required for HRG mitogenic activity. These results provide the first evidence of interactions between progestins and HRB/ErbB signal transduction pathways in mammary cancer and the first demonstration that IGF-IR is required for HRG proliferative effects.
Record Date Created: 20000110

21/7/5 (Item 5 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

10324913 99098456 PMID: 9883987
Involvement of insulin-like growth factors-I and -II and their receptors in medroxyprogesterone acetate-induced growth of mouse mammary

adenocarcinomas.

Elizalde PV; Lanari C ; Molinolo AA ; Guerra FK; Balana ME; Simian M; Iribarren AM; Charreau EH

Instituto de Biologia y Medicina Experimental, Buenos Aires, Argentina. elizalde@proteus.dna.uba.ar

Journal of steroid biochemistry and molecular biology (ENGLAND) Nov 1998, 67 (4) p305-17, ISSN 0960-0760 Journal Code: AX4

Languages: ENGLISH

Document type: Journal Article

Record type: Completed

The role of the insulin-like growth factors (IGFs) system was investigated in hormone-dependent (HD) and -independent (HI) in vivo lines of the medroxyprogesterone acetate (MPA)-induced mammary tumor model in Balb/c mice. IGF-II protein and message showed a three- to four-fold increase in HD lines growing in MPA-treated mice, as compared with HD tumors growing in untreated mice. Progression to a hormone-independent phenotype in all these lines was accompanied by a high constitutive expression of IGF-II. Similar IGF-I mRNA levels were detected in HD and HI lines. Both IGF-I and -II messages arose from the malignant epithelial cells, as shown by in situ hybridization studies. A significant decrease in Man-6P/type II IGF-R content was detected in HD tumors growing in MPA-treated mice as compared with HD lines growing in untreated mice. On the other hand, in HI tumors, notwithstanding high IGF-II synthesis, the levels of Man-6P/type II IGF-R remain high. Competitive inhibition and affinity labeling studies showed an almost exclusive binding of IGF-II to Man-6P/type II IGF-R on tumor membranes. The involvement of IGFs in the growth of epithelial primary cultures of the C4-HD line was evaluated. Exogenous IGF-I potentiated MPA stimulatory effect at concentrations of 50-100 ng/ml. Treatment of C4-HD cells with antisense oligodeoxynucleotides (ASODNs) to type I IGF-R and to IGF-II RNA resulted in a dose-dependent inhibition of MPA-mediated cell proliferation. The inhibition caused by IGF-II ASODNs could not be overcome by the addition of IGF-II up to 150 ng/ml. ASODNs to type I IGF-R at 40 microg/ml reduced by 75% the number of type I IGF-R; ASODNs to IGF-II at 1 microM decreased by 83% the levels of IGF-II protein. Our results provide support for the involvement of IGF-I and -II in MPA-induced mammary tumor growth by autocrine pathways.

Record Date Created: 19990122

21/7/6 (Item 6 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

10301650 98223137 PMID: 9563648

Involvement of EGF in medroxyprogesterone acetate (MPA)-induced mammary gland hyperplasia and its role in MPA-induced mammary tumors in BALB/c mice.

Molinolo A; Simian M; Vanzulli S; Pazos P; Lamb C; Montecchia F; Lanari C

Instituto de Biologia y Medicina Experimental, Academia Nacional de Medicina, Buenos Aires, Argentina. molinolo@proteus.dna.edu.ar

Cancer letters (IRELAND) Apr 10 1998, 126 (1) p49-57, ISSN 0304-3835 Journal Code: CMX

Languages: ENGLISH

Document type: Journal Article

Record type: Completed

In previous papers we have demonstrated that sialoadenectomy inhibited MPA-induced mammary tumorigenesis in BALB/c mice. To further explore the role of EGF in this experimental model, we evaluated its effects on mammary

glands of sialoadenectomized (sialox) MPA-treated female mice and on tumor growth. MPA-treated sialox mice were injected s.c. (n = 3) or not (n = 6) with 5 microg EGF every 36 h for 45 days; MPA-treated sham-operated mice were used as controls (n = 6). Mammary glands from sialox MPA-treated mice are considerably less developed as compared with sham-operated animals. The exogenous administration of EGF restores the usual MPA-induced growth pattern of the glands, thus confirming a role for EGF either in mediating or cooperating with MPA in inducing the mammary architectural changes observed in MPA-treated mice. On the other hand, primary cultures of progestin-dependent (PD) ductal mammary adenocarcinoma in vivo tumor lines and of lobular progestin -independent (PI) tumor lines were used to evaluate the effect of EGF on tumor growth. In vitro EGF was found to stimulate cell proliferation of lobular PI tumor cells and of fibroblastic cells from both types of tumors at concentrations higher than 0.1-0.5 ng/ml and in the presence of 1-5% of charcoal-stripped fetal calf serum. Conversely, no proliferative effects were observed in ductal PD cells under the same experimental conditions, regardless of the presence of 10 nM MPA. It can be concluded that although EGF plays an important role in MPA-induced mammary carcinogenesis, it is not necessary in PD tumor growth.
Record Date Created: 19980507

21/7/7 (Item 7 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

10300805 98156837 PMID: 9497105
Establishment and characterization of a new mammary adenocarcinoma cell line derived from MMTV neu transgenic mice.
Sacco MG; Gribaldo L; Barbieri O; Turchi G; Zucchi I; Collotta A; Bagnasco L; Barone D; Montagna C; Villa A; Marafante E; Vezzoni P
Istituto di Tecnologie Biomediche Avanzate, CNR, Milano, Italy.
Breast cancer research and treatment (NETHERLANDS) Jan 1998, 47 (2) p171-80, ISSN 0167-6806 Journal Code: A8X
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
A new murine cell line, named MG1361, was established from mammary adenocarcinomas arising in a MMTV-neu transgenic mouse lineage where breast tumors develop in 100% of females, due to the overexpression of the activated rat neu oncogene in the mammary gland. The MG1361 cell line shows an epithelial-like morphology, has a poor plating efficiency, low clonogenic capacity, and a doubling time of 23.8 hours. Karyotype and flow cytometry analysis revealed a hypotetraploid number of chromosomes, whereas cell cycle analysis showed 31.2% of cells to be in the G1 phase, 21.4% in S and 47.4% in G2 + M. This cell line maintains a high level of neu expression in vitro. The MG1361 cell line was tumorigenic when inoculated in immunodeficient (nude) mice and the derived tumors showed the same histological features as the primary tumors from which they were isolated. MG1361 cells were positive for specific ER and PgR binding which was competed by tamoxifen, making this cell line useful for the evaluation of endocrine therapy. Moreover, they were sensitive to etoposide treatment, suggesting that they could be a model for the study of chemotherapy-induced apoptosis. As the tumors arising in MMTV-neu transgenic mice have many features in common with human mammary adenocarcinomas (Sacco et al., Gene Therapy 1995; 2: 493-497), this cell line can be utilized to perform basic studies on the role of the neu oncogene in the maintenance of the transformed phenotype, and to test novel protocols of therapeutic

strategies.
Record Date Created: 19980421

21/7/8 (Item 8 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

10235893 99351685 PMID: 10424399
Reversal of estrogen-resistance in murine mammary adenocarcinomas.
Montecchia MF; Molinolo A ; Lanari C
Laboratory of Hormonal Carcinogenesis, Instituto de Biologia y Medicina Experimental, Consejo Nacional de Investigaciones Cientificas y Tecnicas, Buenos Aires, Argentina.
Breast cancer research and treatment (NETHERLANDS) Mar 1999, 54 (2) p93-9, ISSN 0167-6806 Journal Code: A8X
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
From mouse mammary progestin-dependent (PD) adenocarcinomas induced with medroxyprogesterone acetate (MPA) we developed several in vivo lines that are maintained by subcutaneous syngeneic passages in MPA-treated mice and express estrogen (ER) and progesterone receptors (PR). Although most lines remained PD, with time some progestin -independent (PI) variants arose. Both PD and PI tumors regress with estrogen treatment although estrogen-resistant variants may also arise. The object of this paper was to investigate the reversibility of estrogen-resistance and its possible relation with hormone receptor down-regulation. Tumor regression was induced in a progestin -independent tumor line (BET) by treatment with a 5 mg 17beta-estradiol (E2) silastic pellet. One of the tumors started to grow disclosing an estrogen-resistant pattern of growth. This tumor line (BET-R) was transplanted into E2-treated and untreated animals (n = 4-6), selecting for the next passage tumors growing in treated animals. Seven new sublines were obtained at different passages by selecting for the next passage the tumors that had grown in untreated mice (BET-Ra-BET-Rg), until no tumors grew in E2-treated mice. ER and PR were measured by a ligand-binding, dextran-coated charcoal method using a single saturating point. From the seven sublines initiated, the first four proved to be reversible after 3-6 generation transplantation and the last three did not revert. A difference in PR expression between BET and BET-R ($p < 0.05$) was registered, but it did not correlate with the specific hormone behavior since two reverted lines had a pattern similar to that of BET and the other two were similar to BET-R. The expression of PR was higher in E2-treated mice ($p < 0.05$) and highly variable in the parental line. This led us to study the expression of PR at different stages of the estrous cycle. Higher levels of PR were observed in proestrous, estrous, and metestrous ($p < 0.05$) than in diestrous, and undetectable levels were found in ovariectomized mice. No differences in ER expression were detected during the estrous cycle. It can be concluded that under certain experimental conditions, estrogen-resistance is a reversible phenomenon. The experimental manipulation of hormone resistance may help develop strategies to modify the response to anti-hormones in humans.
Record Date Created: 19990908

21/7/9 (Item 9 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

10100077 99229872 PMID: 10215033

Progesterone receptor involvement in independent tumor growth in MPA-induced murine mammary adenocarcinomas.

Montecchia MF; Lamb C; Molinolo AA ; Luthy IA ; Pazos P; Charreau E; Vanzulli S; Lanari C

Instituto de Biologia y Medicina Experimental, CONICET (Consejo Nacional de Investigaciones Cientificas y Tecnicas y Tecnicas), Buenos Aires, Argentina.

Journal of steroid biochemistry and molecular biology (ENGLAND) Jan 1999, 68 (1-2) p11-21, ISSN 0960-0760 Journal Code: AX4

Languages: ENGLISH

Document type: Journal Article

Record type: Completed

We have developed a model of hormonal carcinogenesis in BALB/c female mice, in which MPA induced ductal mammary adenocarcinomas, expressing high levels of estrogen and progesterone receptors (ER and PR). A series of tumor lines, retaining both PR and ER expression, were obtained from selected tumors, which are maintained by syngeneic passages. In this model progesterone behaves as the growth-stimulating hormone (progesterone-dependent or PD tumors), whereas estrogens induce tumor regression. Through selective treatments we were able to derive a series of progesterone-independent (PI) variants. These lines do not require progesterone treatment to grow in ovariectomized female BALB/c mice, but retain, however, the expression of ER and PR. The aim of this paper is to investigate a possible regulatory role of the progesterone receptor (PR) on PI tumor growth. ER and PR were detected by immunocytochemistry in all lines studied. They were also characterized using biochemical assays and Scatchard plots. No differences in Kd of PR or ER were detected in PI variants. AR or GR were not detected in tumor samples using biochemical assays. Estradiol (5 mg silastic pellet) induced complete tumor regression in all tumors tested. We also evaluated the effects of different antiprogestins on tumor growth. Onapristone (10 mg/kg/day) and mifepristone (4.5 mg/kg/day) were able to induce complete tumor regression. The antiandrogen flutamide (5 mg silastic pellet) had no effect on tumor growth in agreement with the lack of androgen receptors. We used an in vitro approach to corroborate that the antiprogestin-induced inhibition was not attributable to an intrinsic effect. Cultures of a selected PI line were treated with PR antisense oligodeoxynucleotides (ASPR) to inhibit in vitro cell proliferation. A significant decrease of 3H-thymidine uptake was observed in cells of a PI line growing in the presence of 2.5% charcoalized fetal calf serum and 0.8-20 microg/ml ASPR. It can be concluded that the PR pathway is an essential path in the growth stimulation of PI tumors.

Record Date Created: 19990506

21/7/10 (Item 10 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

08862886 95012868 PMID: 7927919

Effect of sialoadenectomy on medroxyprogesterone-acetate-induced mammary carcinogenesis in BALB/c mice. Correlation between histology and epidermal-growth-factor receptor content.

Kordon EC; Guerra F; Molinolo AA; Elizalde P; Charreau EH; Pasqualini CD; Montecchia F; Pazos P; Dran G; Lanari C

Division Medicina Experimental, Instituto de Investigaciones Hematologicas, Academia Nacional de Medicina, Buenos Aires, Argentina.

International journal of cancer. Journal international du cancer (UNITED

STATES) Oct 15 1994, 59 (2) p196-203, ISSN 0020-7136 Journal Code: GQU

Languages: ENGLISH

Document type: Journal Article

Record type: Completed

To evaluate the possible involvement of the salivary glands in the modulation of medroxyprogesterone (MPA)-induced mammary tumorigenesis, 48 sialoadenectomized virgin BALB/c female mice and 47 controls were treated with 40mg MPA depot s.c. every 3 months for 1 year. Mammary tumors developed in 11 sialoadenectomized and in 34 control mice with similar latencies. In both groups, 75% of the tumors were ductal and progestin -dependent (PD) while the remainder were lobular and progestin - independent (PI). Epidermal growth factor (EGF) levels were measured in salivary glands (SG-EGF) and serum (S-EGF) in both groups. MPA induced a significant increase in SG-EGF and in S-EGF that became evident only after 1 month of MPA treatment. No increase in S-EGF was detected in MPA-treated sialoadenectomized mice, indicating that salivary glands are the major source of S-EGF. The presence of EGF receptors (EGF-R) was investigated in ductal PD and PI tumor lines and compared with 8 PI tumor lines of lobular origin. A significant difference in EGF-R content was found between lobular and ductal tumors. No increase in EGF-R was noted when ductal tumors became autonomous. EGF-R did not correlate with tumor growth rate and there was an inverse correlation between EGF-R and steroid receptors. When the effect of sialoadenectomy on tumor growth was tested in vivo in syngeneic transplants of 2 ductal PD, 1 ductal PI and 2 lobular PI mammary adenocarcinomas, it was not found to be significant when compared with the controls. It may be concluded that SG-EGF plays an important role in the induction of mammary adenocarcinomas by MPA, while it has no significant effect on the growth of established tumors.

Record Date Created: 19941115

21/7/11 (Item 11 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

08473281 95179617 PMID: 7874571

Correlation of TGF-beta 1 expression with medroxyprogesterone acetate responsiveness in mouse mammary adenocarcinomas.

Elizalde PV; Guerra FK; Gravano M; Lanari C ; Lippman ME; Charreau EH; Lupu R

Instituto de Biologia y Medicina Experimental (IBYME) Obligado 2490, Buenos Aires, Argentina.

Cancer investigation (UNITED STATES) 1995, 13 (2) p173-80, ISSN 0735-7907 Journal Code: CAI

Languages: ENGLISH

Document type: Journal Article

Record type: Completed

We investigated the expression of transforming growth factors beta 1 and alpha (TGF-beta 1, TGF-alpha) in hormone-responsive (MPA-R) and unresponsive (MPA-U) tumor lines obtained from medroxyprogesterone acetate (MPA)-induced mammary adenocarcinomas in BALB/c mice. The tumors were transplanted into MPA-treated and untreated mice. TGF-beta 1 gene expression was observed in the MPA-R lines growing in untreated animals, but not in MPA-treated mice. TGF-beta 1 mRNA was not detected in the MPA-U tumor lines growing in either MPA-treated or untreated animals. In MPA-R lines the levels of TGF-beta 1 expression were inversely correlated to growth rate. High-affinity TGF-beta 1 receptors were present in the MPA-R

tumors. These results suggest that one of the mechanisms by which MPA exerts its proliferative effect on MPA-R tumor lines is inhibition of the expression of TGF-beta 1. Thus, the lack of expression of TGF-beta 1 in MPA-U tumors may be related to the acquisition of autonomous growth.
Record Date Created: 19950405

21/7/12 (Item 12 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

07115120 94169394 PMID: 8123867
Progesterone induction of mammary carcinomas in BALB/c female mice. Correlation between progestin dependence and morphology.
Kordon EC; Molinolo AA; Pasqualini CD; Charreau EH; Pazos P; Dran G; Lanari C
Departamento de Medicina Experimental, Academia Nacional de Medicina, Buenos Aires, Argentina.
Breast cancer research and treatment (NETHERLANDS) Oct 1993, 28 (1) p29-39, ISSN 0167-6806 Journal Code: A8X
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
We have demonstrated that medroxyprogesterone acetate (MPA), when administered in high doses, induces mammary carcinomas in virgin female BALB/c mice. Since one of the possible explanations for this effect was its progestagenic effects, we decided to investigate whether progesterone (Pg) alone could also induce mammary adenocarcinomas in our model and if MPA at doses lower than those used to establish the model was also carcinogenic. A total of 136 mice were subdivided into 3 groups: Group 1, 44 mice were implanted s.c. with 40 mg Pg silastic pellets at the beginning of the experiment, and 6 months later with a 20 mg Pg pellet; Group 2, 45 mice were similarly treated with MPA pellets; Group 3, 47 mice were inoculated s.c. with 40 mg MPA every three months. At the end of 20 months, 9 animals had developed mammary tumors in Group 1, 18 in Group 2 and 34 in Group 3 (actuarial incidence = 28%, 58%, and 98%, respectively); tumor latency was similar in all groups: 46.2 +/- 13.1, 51.3 +/- 9.9, and 50.1 +/- 2.1 weeks, respectively. Seven (Group 1), 14 (Group 2), and 25 (Group 3) tumors were transplanted into syngeneic mice to determine progestin dependence. All tumors, except one from Group 1, were histologically characterized. In Group 1 (Pg 60 mg), 4 tumors (67%) were infiltrating lobular carcinomas and 2 were ductal carcinomas (33%). In Group 2 (MPA 60 mg), 2 tumors (14%) were lobular and 12 were ductal adenocarcinomas (86%) (Group 1 vs Group 2: $p < 0.05$), whereas in Group 3 (MPA 160 mg), 8 were lobular carcinomas (32%) and 17 were ductal carcinomas (68%). In syngeneic passages all lobular tumors behaved as progestin independent (PI) and ductal tumors as progestin dependent (PD). All ductal tumors , except one, expressed estrogen receptors (ER) and progesterone receptors (PR), whereas receptor expression was variable in lobular carcinomas. It can be concluded that Pg induces mostly lobular, PI mammary tumors in BALB/c female mice. The fact that most MPA-induced tumors are ductal and PD suggests that the two hormones use different carcinogenic pathways.
Record Date Created: 19940414

21/7/13 (Item 13 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

06285011 87130787 PMID: 3815380
Growth inhibition by progestins in a human endometrial cancer cell line with estrogen-independent progesterone receptors.
Terakawa N; Hayashida M; Shimizu I; Ikegami H; Wakimoto H; Aono T; Tanizawa O; Matsumoto K; Nishida M
Cancer research (UNITED STATES) Apr 1 1987, 47 (7) p1918-23, ISSN 0008-5472 Journal Code: CNF
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
The presence of estrogen-independent progesterone receptors (PgR) was demonstrated in a subline of a human endometrial cancer cell line, Ishikawa cells, although the original Ishikawa cells contained estrogen-inducible PgR. Scatchard plot analysis of cytoplasmic binding data in our subline (IK-90) revealed a high affinity binding site for R5020 (Kd, 1.0 nM) with maximum binding sites of 158 fmol/mg protein. Competition experiments showed a binding specificity similar to that of typical PgR. By low-salt sucrose gradient centrifugation, radioactive 8S and 4S peaks were found. The addition of 1 microM progesterone in culture medium resulted in a rapid nuclear translocation of cytoplasmic PgR. In contrast to the original cells, estrogen receptors could not be detected in IK-90 cells, and an addition of 17 beta-estradiol (10 nM) to culture medium failed to increase PgR. Accumulation of glycogen in cytoplasm of IK-90 cells in response to R5020 (0.1-1 microM) was observed by periodic acid-Schiff staining. The addition of R5020 to culture medium (0.1-1 microM) also caused a marked decrease in the growth of IK-90 cells, whereas the other steroids including 17 beta-estradiol, tamoxifen, testosterone, and cortisol had no significant effects. These results demonstrate for the first time the presence of a progestin -responsive human endometrial cancer cell line that contains estrogen- independent functional PgR. IK-90 cells appear to be an ideal model for studying the mechanism of the antiproliferative effect of progestin on endometrial cancer cells.
Record Date Created: 19870422

21/7/14 (Item 14 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

06020307 88152823 PMID: 2894344
Deletion proximal to DXS68 locus (L1 probe site) in a boy with Duchenne muscular dystrophy, glycerol kinase deficiency, and adrenal hypoplasia.
Chelly J; Marlhens F; Dutrillaux B; Van Ommen GJ; Lambert M; Haioun B; Boissinot G; Fardeau M; Kaplan JC
Inserm U. 129, Institut de Pathologie Moleculaire, CHU Cochin, Paris, France.
Human genetics (GERMANY, WEST) Mar 1988, 78 (3) p222-7, ISSN 0340-6717 Journal Code: GED
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
We report a case of a boy with Duchenne muscular dystrophy (DMD) associated with GK deficiency (GK), congenital adrenal hypoplasia (AHC), and mental retardation. Cytogenetic analysis of prometaphasic chromosomes revealed an interstitial chromosome deletion at Xp21.2 possibly extending to Xp21.1 or Xp21.3. His phenotypically normal mother was heterozygous for this deletion. DNA probe analysis on Southern blots showed that the deletion affected the following probe sites: 754, pERT 84, 21A, XJ2.3, pERT

87, JBir, and J66-H1 , whereas L1, C7 , and CX5.4 probes gave a normal signal. Pulse field gel electrophoresis after SfiI digestion did not show abnormal fragments with L1. These data are consistent with a deletion of about 4 megabases and indicate that the GK and AHC loci are proximal to L1 and distal to J66-H1.
Record Date Created: 19880418

21/7/15 (Item 15 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

05701970 88207465 PMID: 2966586
Steroid receptors and clinical outcome in patients with adenocarcinoma of the endometrium.
Ehrlich CE; Young PC; Stehman FB; Sutton GP; Alford WM
Department of Obstetrics and Gynecology, Indiana University Medical Center, Indianapolis.
American journal of obstetrics and gynecology (UNITED STATES) Apr 1988, 158 (4) p796-807, ISSN 0002-9378 Journal Code: 3NI
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
Progesterone receptor content was measured in tissue samples from 175 patients with endometrial adenocarcinoma by use of the dextran-charcoal method. The estradiol receptor content was determined in 138 of these samples. Ninety-two tumors (52.6%) tested positive for progesterone receptors (greater than 50 fmol/mg cytosol protein) and 111 (80.4%) tested positive for estradiol receptors (greater than 6 fmol/mg). Median follow-up was 27.3 months (range 1 to 152 months). Progesterone receptor status correlated significantly with grade, histology, adnexal spread, age, and recurrence rate in stage I cancer. There was no correlation between progesterone receptor status and clinical stage, myometrial invasion, peritoneal cytology, retroperitoneal lymph node involvement, or spread to the cervix. Estradiol receptor status correlated with adnexal spread and recurrence rate. Recurrence in patients with stage I disease was significantly more common if tumors were negative for progesterone receptor (16 of 43, 37.2%) than if they were positive (four of 57, 7%; p less than 0.001). Recurrence was also more common if tumors were negative for estradiol receptor (seven of 17, 41.2%) than if they were positive (eight of 63, 12.7%; p = 0.02). In recurrent or advanced disease, response to progestin was independent of estradiol receptor content, but tumors positive for progesterone receptors responded significantly more often than those lacking progesterone receptors. Overall survival was superior for patients with progesterone receptor-positive tumors (p = 0.001). Although survival in clinical stages I and II was also superior in patients with lesions positive for progesterone receptors (p = 0.13), there was no statistical difference in survival between patients with progesterone receptor-positive or -negative cancers and surgical stages I and II disease (p = 0.12). Estradiol receptor status had no apparent correlation with survival.
Record Date Created: 19880607

21/7/16 (Item 16 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

05238255 88291014 PMID: 3261050

Splenocyte natural killer cell activity and metastatic potential are inversely dependent on estrous stage.

Gruber SA; Hoffman RA; Sothern RB; Lakatua D; Carlson A; Simmons RL; Hrushesky WJ

Department of Surgery, University of Minnesota, Minneapolis.

Surgery (UNITED STATES) Aug 1988, 104 (2) p398-403, ISSN 0039-6060 Journal Code: VC3

Contract/Grant No.: RO1 CA 31635, CA, NCI

Languages: ENGLISH

Document type: Journal Article

Record type: Completed

We have previously shown that the timing of surgical removal of an estrogen -receptor -bearing mammary adenocarcinoma within the estrous cycle of the female C3HeB/FeJ mouse profoundly influences the frequency of subsequent tumor cell metastasis. In order to investigate the role of the immune response in this phenomenon, we measured splenic natural killer (NK) cell activity and interleukin-2 (IL-2) production in 80 female cycling mice, 16 to 18 weeks old, assigned to one of four estrous stages as determined by relative quantity of vaginal cellularity; proestrus, estrus, metestrus, and diestrus. After prolonged synchronization on 12-hours-on, 12-hours-off light-dark circadian schedules, daily vaginal smears were obtained for 2 weeks to characterize estrous cycling. On the day the animals were killed, vaginal smears were performed and single-cell suspensions were prepared from the harvested spleens. Direct cytotoxicity of spleen cells against the YAC tumor target was assessed immediately in a 3 1/2 hour 51Cr release assay and expressed as NK activity in lytic units (LU 20%). IL-2 production was determined in a bioassay with the IL-2-dependent CTLL-2 cell line. Significant differences in NK activity among estrous stages mimicking the variation found in frequency of surgical cure from mammary adenocarcinoma were observed ($p = 0.035$; one-way analysis of variance), with the time of lowest metastatic potential corresponding precisely with the time of highest splenocyte NK activity. These both occurred during the proestrus and estrus stages, characterized by high fertility, ovulation, and peak FSH, LH, and estrogen concentrations. In addition, NK activity was found to correlate significantly with IL-2 production ($r = 0.4$, $p$ less than 0.0005). These results indicate that important components of the cellular immune response to cancer vary rhythmically with hormonal changes in the host and may represent one of the factors affecting the delicate balance between host and tumor that alters the frequency of postsurgical metastatic dissemination.

Record Date Created: 19880902

21/7/17 (Item 17 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

05112902 86321827 PMID: 3463244

Phenotypic change of the transplantable MXT mammary adenocarcinoma into mixed bone producing sarcoma-like tumors.

Kiss R; Devleeschouwer N; Paridaens RJ; Danguy A; Heuson JC; Atassi G

Anticancer research (GREECE) Jul-Aug 1986, 6 (4) p753-9, ISSN 0250-7005 Journal Code: 59L

Languages: ENGLISH

Document type: Journal Article

Record type: Completed

The B6D2F1 mouse mammary adenocarcinoma was adapted to grow in vitro as monolayer. After in vitro passaging of tumor cells, phenotypic

changes occurred that were expressed in vivo. Following intraperitoneal inoculation of tumor cells, bone-forming tumors developed. These tumors consisted of undifferentiated adenocarcinoma mixed with large amount of cartilagenous and osseous tissue. The etiology of these phenotypic changes was not yet determined. However, hypothesis of the possible origin of the cartilage and bone forming tissue was formulated. The biologic characterization of the intraperitoneally bone-forming tumor was achieved and the experimental conditions to preserve and induce the reproducible sarcoma-like bone forming tumors were defined. Our data support the usefulness of this new original model for fundamental research as well as for screening of anticancer drugs.
Record Date Created: 19861010

21/7/18 (Item 18 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

05026653 86250239 PMID: 3721931
Influence of irradiation of a primary tumor on the labeling index and estrogen receptor index in a distant tumor focus.
Fisher B; Saffer EA; Deutsch M
International journal of radiation oncology, biology, physics (UNITED STATES) Jun 1986, 12 (6) p879-85, ISSN 0360-3016 Journal Code: G97
Contract/Grant No.: CA-14972, CA, NCI
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
The present investigation reaffirms our observation that removal of a C3H mouse mammary adenocarcinoma results in a perturbation of tumor cells in a metastatic focus. An increase occurs in the proportion of cells undergoing DNA synthesis (labeling index, LI), and a decrease occurs in the proportion demonstrating estrogen receptor (ER index; ERI). The changes are transient but of sufficient duration and magnitude to produce an increase in the size of a distant tumor. This study was conducted to determine whether cytoreduction of a primary tumor by irradiation would produce a similar change in metastatic tumor cells and whether preoperative radiation would obtund the effect of primary tumor removal. The administration of a maximum tolerated dose of radiation (50 Gy) to a primary tumor produced a significant (p less than 0.001) increase in LI and decrease in ERI of a lesser magnitude than that observed following surgical removal of the primary tumor, but still sufficient to enhance the growth of a metastatic focus. Whereas, there was almost a 50% increase in LI in a metastasis 1 and 3 days following removal of a primary tumor the increase was only 13% three days after radiation. There was a 20% decrease in ERI 3 days following radiation and a 37% decrease at that time following tumor removal. Preoperative irradiation of a primary tumor 1, 3, or 5 days prior to tumor removal, obtunds the increase in LI and decrease in ERI following operation. Radiation the day before surgery was most effective because the changes in a distant focus occurring as a result of the radiation and of the surgery were prevented. The clinical relevance of these observations deserves further consideration.
Record Date Created: 19860818

21/7/19 (Item 19 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

04950679 85269032 PMID: 4022502
Histopathologic correlations of estrogen and progestin receptor protein in epithelial ovarian carcinomas.
Schwartz PE; Merino MJ; Livolsi VA; Lawrence R; MacLusky N; Eisenfeld A
Obstetrics and gynecology (UNITED STATES) Sep 1985, 66 (3) p428-33, ISSN 0029-7844 Journal Code: OC2
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
One hundred thirteen primary epithelial ovarian cancers were analyzed for estrogen and progestin receptor content and the results compared with multiple histologic parameters (grade, necrosis, fibrosis, lymphocyte infiltration, mitoses, tumor giant cells, psammoma bodies, stroma). Grade 4 cancers had a statistically greater likelihood of containing estrogen receptors (P = .03) than did lower grade cancers. However, grade 3 tumor samples containing abundant (3+ and 4+) mitoses had a significantly greater number of estrogen receptor negative cancers (P = .01) than did cancers containing none to moderate (0-2+) mitoses. The only histologic parameter that demonstrated any statistically significant association with progestin receptor content was the presence of lymphocyte infiltration. Samples demonstrating moderate (2+ and 3+) lymphocyte infiltration had a significantly (P = .005) greater chance of being progestin receptor negative than cancers containing none to minimal (0 to 1+) lymphocyte infiltration. This study suggests that estrogen and progestin receptor content of epithelial ovarian cancers is associated with grade and mitoses (estrogen receptor) and lymphocyte infiltration (progestin receptor). With the exception of these relationships, the estrogen and progestin receptor content of ovarian cancers appears independent of all of the histologic parameters examined.
Record Date Created: 19850925

21/7/20 (Item 20 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

04908704 84259069 PMID: 6331648
Epidermal growth factor binding by breast tumor biopsies and relationship to estrogen receptor and progestin receptor levels.
Fitzpatrick SL; Brightwell J; Wittliff JL; Barrows GH; Schultz GS
Cancer research (UNITED STATES) Aug 1984, 44 (8) p3448-53, ISSN 0008-5472 Journal Code: CNF
Contract/Grant No.: CA 31895, CA, NCI; CA-19657, CA, NCI
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
Epidermal growth factor (EGF) may be important in regulating the growth of some breast cancer cells in vivo because of its mitogenic action on some breast cancer cell lines in vitro. Epidermal growth factor receptors (EGF-R) were measured in a series of breast tumors to determine what percentage of breast tumors express EGF-R and whether EGF-R was independent of expression of estrogen receptor and progestin receptor. Specific binding of 125I-EGF to membranes from pooled homogenates of breast tumors reached equilibrium after 45 min at 25 degrees and remained constant. Scatchard analysis of 125I-EGF binding indicated a single class of receptors with an apparent Kd of 2 nM and a binding capacity of 28 fmol/mg of membrane protein, and the binding of 125I-EGF was not effectively competed for by insulin, fibroblast growth factor, growth hormone, or prolactin. Specific

binding of 125I-EGF of 1 fmol or greater/mg of membrane protein and 15% or greater specific binding was detected in 48% of 137 unselected primary and metastatic breast tumors. The frequency distribution of EGF binding values was unimodal, with a progressive decrease in the proportion of patients with high EGF binding values. The values of EGF binding ranged from 1 to 121 fmol/mg of protein, with an arithmetic mean of 8.4 fmol/mg of protein and a geometric mean of 3.2 fmol/mg of protein. Forty-two % of 24 metastatic breast tumors were positive for EGF binding, with an arithmetic mean of 6.3 fmol/mg of protein and a geometric mean of 4.1 fmol/mg of protein. The magnitude of EGF binding in individual tumors was independent of either estrogen receptor or progestin receptor levels, although the highest quantities of EGF binding were expressed by tumors lacking steroid receptors. Approximately 20% of the tumors in the study were EGF-R-positive and ER-negative, suggesting that the growth of these tumors may be regulated predominantly by a peptide hormone (EGF) rather than a steroid hormone (estrogen). EGF binding did not correlate significantly with age of the patients. Correlation analysis between EGF binding and the percentage of malignant and nonmalignant cell types present in sections of tumor adjacent to the area assayed for EGF binding indicated that the percentage of malignant cells is an important factor in determining the amount of EGF binding in tumor homogenates. The recent discovery of transforming growth factors which interact with the EGF-receptor system suggests additional roles for EGF receptors in breast cancer.

Record Date Created: 19840829

21/7/21 (Item 21 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

04653005 83155343 PMID: 6403233

Increased DNA binding of the estrogen receptor in an estrogen -resistant mammary cancer.

Baskevitch PP; Vignon F; Bousquet C; Rochefort H

Cancer research (UNITED STATES) May 1983, 43 (5) p2290-7, ISSN 0008-5472 Journal Code: CNF

Languages: ENGLISH

Document type: Journal Article

Record type: Completed

In the C3H mouse mammary adenocarcinoma , estradiol cannot induce the progesterone receptor , and the tumor growth rate is not decreased by ovariectomy. To find an explanation for this estrogen resistance, we have compared the estrogen receptor (ER) from this tumor to the ER of uterus and of the mammary tumors induced in rats by dimethylbenz(a)anthracene. Since the ER concentration of the C3H tumor is low (congruent to 20 fmol/mg protein), we have used iodoestradiol of high specific activity to label the receptor. Several criteria of ER activation were studied. The dissociation rates of estradiol with or without sodium molybdate were similar in all tissues. In metrizamide isopycnic gradients, ER from rat uterus and C3H tumor had a similar density, both in the presence or absence of DNA. The binding of ER to DNA-cellulose was analyzed by incubating to equilibrium a constant amount of ER with a variable amount of DNA, the cellulose concentration being kept constant. The saturation data were plotted according to the method of Scatchard. The apparent affinity for DNA of the cytosol ER was similar for the rat dimethylbenz(a)anthracene tumors and the uterus (Kd congruent to 10 microM) but was significantly higher for the C3H tumor ER (Kd congruent to 2.3

microM). Neither the substitution of estradiol by iodoestradiol, nor the difference in cytosol protein and ER concentrations, nor the nonspecific steroid binding to DNA-cellulose could explain this result. This difference was confirmed when using DNA-agarose or soluble DNA in sucrose gradients. Finally, the salt concentrations necessary to elute ER from DNA-cellulose columns were 0.20 and 0.28 M for uterine and C3H tumor ER, respectively. To conclude, the C3H tumor has a low content of ER which appears to have a higher affinity for DNA than the ER of estrogen-responsive tissue. We suggest that the reason for the inefficiency of ER in the C3H tumor may be related to its increased affinity for nonspecific DNA sites.
Record Date Created: 19830527

21/7/22 (Item 22 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

04044271 86003033 PMID: 6085722
Studies of mammary carcinoma metastasis in a mouse model system. I: Derivation and characterization of cells with different metastatic properties during tumour progression in vivo.
Barnett SC; Eccles SA
Clinical & experimental metastasis (ENGLAND) Jan-Mar 1984, 2 (1) p15-36, ISSN 0262-0898 Journal Code: DFC
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
The biological and metastatic properties of cells from a murine mammary adenocarcinoma , MT1, were studied during serial transplantation in syngeneic hosts. Over 35 generations the tumour progressed from a well-differentiated, poorly metastatic neoplasm to an anaplastic highly metastatic state. At early passages the tumour yielded uniform cultures of cuboidal epithelial cells, at passage 17 both epitheloid and spindle type cells were present, and by passage 30 only spindle type cells were obtained. Epithelioid cell lines and clones when injected intravenously into syngeneic hosts produced lung colonies only, whereas spindle cell lines were capable of extensive extrapulmonary colonisation. Similar patterns of dissemination and growth were seen in spontaneous metastasis assays. In spite of the marked phenotypic differences in these 'subpopulations', their comparable ultrastructural features, oestrogen receptor levels, expression of MMTV antigens, DNA content and lectin binding profiles suggested a common cell lineage. It is proposed that these cell lines will be of use in the determination of tumour and host factors influencing tumour progression and the evolution of metastatic potential.
Record Date Created: 19851112

21/7/23 (Item 1 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)


13082239 BIOSIS NO.: 200100289388
Transactivation specificity of glucocorticoid vs. progesterone receptors : Role of functionally different interactions with transcription factors.
AUTHOR: Song Liang-Nian(a); Rusconi Sandro; Simons S Stoney Jr(a)
AUTHOR ADDRESS: (a)NIDDK, NIH, Bldg. 8, Room B2A-11, Bethesda, MD, 20892-0805**USA
JOURNAL: FASEB Journal 15 (4):pA527 March 7, 2001

MEDIUM: print
CONFERENCE/MEETING: Annual Meeting of the Federation of American Societies for Experimental Biology on Experimental Biology 2001 Orlando, Florida, USA March 31-April 04, 2001
ISSN: 0892-6638
RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English

ABSTRACT: A major unanswered question of glucocorticoid and progesterone action is how different whole cell hormonal responses can arise when both of the cognate receptors bind to, and activate, the same hormone response elements (HREs). We have previously documented that the EC50 of agonist complexes, and partial agonist activity of antagonist complexes, of glucocorticoid receptors (GRs) are modulated by the glucocorticoid modulatory element (GME). Similarly, the activities of GR and of progesterone receptors (PRs) are modified by increased amounts of homologous receptor and of coregulators. We have used a line of mouse mammary adenocarcinoma (1470.2) cells to test the hypothesis that these components differentially alter GR and PRs transcriptional properties. To remove possible cell-specific differences, we have examined both receptors in the same cells. In order to segregate the responses that might be due to unequal nucleosome reorganization from those reflecting interactions with other components, we chose a transiently transfected template containing a simple glucocorticoid response element, or GRE (i.e., GREtkLuc). No significant differences were found with elevated levels of each receptor. Quantitative differences were observed with GME and SMRT that were large enough to significantly alter the sensitivity of gene induction. The responses to the added corepressors SMRT and NCoR were opposite for GR and PR. Studies with chimeric GR/PR receptors indicated that no one segment of PR or GR is responsible for these differences and that the composite response likely involves interactions between the N- and C-termini of receptors. Collectively, the data suggest that differences between GR and PR induction in a given cell can be controlled, in part, by unequal responses to assorted nuclear transcriptional cofactors.

21/7/24 (Item 2 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)


06286318 BIOSIS NO.: 000086120501
EFFECTS OF RECURRENT SELECTION IN CORN POPULATIONS
AUTHOR: RODRIGUEZ O A; HALLAUER A R
AUTHOR ADDRESS: DEP. AGRON., IOWA STATE UNIV., AMES, IOWA 50011.
JOURNAL: CROP SCI 28 (5). 1988. 796-800. 1988
FULL JOURNAL NAME: Crop Science
CODEN: CRPSA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: Recurrent selection methods were conducted in corn (Zea mays L.) populations to increase the frequency of favorable alleles for grain yield. Populations under recurrent selection were evaluated to estimate response to selection and to compare the relative effectiveness of the different methods of recurrent selection for grain yield improvement. Ten

populations, their improved strains, and the S1 generation of the original and improved strains were evaluated in four field environments. This study was conducted to estimate the direct and indirect responses to selection of the 10 populations and their respective S1 generations for different methods of selection. Positive response to selection for greater grain yield was realized for each selection method except for one population (BSCB1) undergoing reciprocal recurrent selection. Average response (0.249 Mg ha-1 cycle-1) for the intrapopulation selection methods was greater than the average response (0.033 Mg ha-1 cycle-1) for the interpopulation selection methods. Response in the S1 generations was similar to the response of the noninbred populations. Reduction in inbreeding depression averaged 12%. The S1 generations of two selected populations [BS13(S)C4 and BS12(HI )C7 ] had significantly greater yields than the nonselected, noninbred populations from which the selected populations were derived. Positive response to selection was accomplished without selection for taller, later-maturity genotypes. No consistent trends were detected for changes in root and stalk lodging with selection for grain yield.

21/7/25 (Item 3 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)


05324618 BIOSIS NO.: 000032047747
ETIOLOGY OF MAMMARY TUMORS INDUCED IN ICRC MICE BEARING SYNGENEIC RENAL GRAFTS OF THYMUS GLAND
AUTHOR: PAI S R
AUTHOR ADDRESS: CANCER RES. INST., TATA MEMORIAL CENT., PAREL, BOMBAY-400012, INDIA.
JOURNAL: UICC (UNION INTERNATIONALE CONTRE LE CANCER, INTERNATIONAL UNION AGAINST CANCER). 14TH INTERNATIONAL CANCER CONGRESS, BUDAPEST, HUNGARY, AUG. 21-27, 1986. ABSTRACTS, LECTURES, SYMPOSIA AND FREE COMMUNICATIONS, VOLS. 1, 2, 3, LATE ABSTRACTS, AND REGISTER. XVI+479P.(VOL. 1); XVI+298P.(VOL. 2); XVI+531P.(VOL. 3); 15P.(LATE ABSTRACTS); 40P.(REGISTER) S. KARGER AG: BASEL, SWITZERLAND; NEW YORK, N.Y., USA; AKADEMIAI KIADO: BUDAPEST, HUNGARY. PAPER. ISBN 3-8055-4434-0(KARGER); ISBN 963-05-4422-9(VOL. 1); ISBN 963-05-4423-7(VOL. 2); ISBN 963-05-4424-5(VOL. 3); ISBN 963-05-4439-3(LATE ABSTRACTS); ISBN 963-05-4425-3(REGISTER); ISBN 963-05-4421-0(GENERAL). 0 (0). 1986. 1153. 1986
CODEN: 24789
DOCUMENT TYPE: Meeting
RECORD TYPE: Citation
LANGUAGE: ENGLISH

21/7/26 (Item 1 from file: 73)
DIALOG(R)File 73:EMBASE


06073528 EMBASE No: 1995104005
Correlation of TGF-betainf 1 expression with medroxiprogesterone acetate responsiveness in mouse mammary adenocarcinomas
Elizalde P.V.; Guerra F.K.; Gravano M.; Lanari C. ; Lippman M.E.; Charreau E.H.; Lupu R.
Instituto de Biologia, Medicina Experimental (IBYME), Obligado 2490,Buenos Aires 1428 Argentina

Cancer Investigation ( CANCER INVEST. ) (United States) 1995, 13/2 (173-180)
CODEN: CINVD ISSN: 0735-7907
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

We investigated the expression of transforming growth factors betainf 1 and alpha (TGF-betainf 1, TGF-alpha) in hormone-responsive (MPA-R) and unresponsive MPA-U) tumor lines obtained from medroxyprogesterone acetate (MPA)-induced mammary adenocarcinomas in BALB/c mice. The tumors were transplanted into MPA-treated and untreated mice. TGF-betainf 1 gene expression was observed in the MPA-R lines growing in untreated animals, but not in MPA-treated mice. TGF-betainf 1 mRNA was not detected in the MPA-U tumor lines growing in either MPA-treated or untreated animals. In MPA-R lines the levels of TGF-betainf 1 expression were inversely correlated to growth rate. High-affinity TGF-betainf 1 receptors were present in the MPA-R tumors. These results suggest that one of the mechanisms by which MPA exerts its proliferative effect on MPA-R tumor lines is inhibition of the expression of TGF-betainf 1. Thus, the lack of expression of TGF-betainf 1 in MPA-U tumors may be related to the acquisition of autonomous growth.

21/7/27 (Item 1 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)


135255304 CA: 135(18)255304a JOURNAL
Development of mammary adenocarcinomas by tissue-specific knockout of Brca2 in mice
AUTHOR(S): Ludwig, Thomas; Fisher, Peter; Murty, Vundavalli; Efstratiadis, Argiris
LOCATION: Department of Anatomy and Cell Biology, Columbia University, New York, NY, 10032, USA
JOURNAL: Oncogene DATE: 2001 VOLUME: 20 NUMBER: 30 PAGES: 3937-3948
CODEN: ONCNES ISSN: 0950-9232 LANGUAGE: English PUBLISHER: Nature Publishing Group
SECTION:
CA214001 Mammalian Pathological Biochemistry
CA203XXX Biochemical Genetics
IDENTIFIERS: gene Brca2 knockout mouse model mammary tumorigenesis
DESCRIPTORS:
Mammary gland...
adenocarcinoma; gene Brca2 knockout mouse as model for mammary tumorigenesis
Gene,animal... Transcription factors...
BRCA2; gene Brca2 knockout mouse as model for mammary tumorigenesis
Genetic element...
CRE (cAMP-responsive element); gene Brca2 knockout mouse as model for mammary tumorigenesis
Ploidy...
diploidy; gene Brca2 knockout mouse as model for mammary tumorigenesis
Cyclins...
D1; gene Brca2 knockout mouse as model for mammary tumorigenesis
Alleles... Disease models... Estrogen receptors... Mouse... p53(protein)...
gene Brca2 knockout mouse as model for mammary tumorigenesis
Mutation...

gene Brca2; gene Brca2 knockout mouse as model for mammary tumorigenesis
Genetic element...
loxP; gene Brca2 knockout mouse as model for mammary tumorigenesis
Mammary gland...
neoplasm; gene Brca2 knockout mouse as model for mammary tumorigenesis
Cyclin dependent kinase inhibitors...
p21CIP1/WAF1; gene Brca2 knockout mouse as model for mammary tumorigenesis
Gene,animal...
TP53; gene Brca2 knockout mouse as model for mammary tumorigenesis

21/7/28 (Item 2 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)


130180830 CA: 130(14)180830e JOURNAL
Involvement of insulin-like growth factors-I and -II and their receptors in medroxyprogesterone acetate-induced growth of mouse mammary adenocarcinomas
AUTHOR(S): Elizalde, Patricia V.; Lanari, Claudia; Molinolo, Alfredo A.; Guerra, Fabiana K.; Balana, Maria E.; Simian, Marina; Iribarren, Adolfo M.; Charreau, Eduardo H.
LOCATION: Instituto de Biologia y Medicina Experimental (IBYME), 1428, Buenos Aires, Argent.
JOURNAL: J. Steroid Biochem. Mol. Biol. DATE: 1998 VOLUME: 67 NUMBER: 4 PAGES: 305-317 CODEN: JSBBEZ ISSN: 0960-0760 LANGUAGE: English
PUBLISHER: Elsevier Science Ltd.
SECTION:
CA214001 Mammalian Pathological Biochemistry
CA202XXX Mammalian Hormones
IDENTIFIERS: IGF medroxyprogesterone mediated mammary adenocarcinoma growth, receptor IGF medroxyprogesterone mediated mammary adenocarcinoma growth
DESCRIPTORS:
Mammary epithelium...
IGF-I and IGF-II expression in malignant epithelial cells of mouse mammary adenocarcinomas
Breast adenocarcinoma... Insulin-like growth factor I receptors...
Insulin-like growth factor II receptors...
involvement of IGF-I and IGF-II and their receptors in medroxyprogesterone acetate-induced growth of mouse mammary adenocarcinomas
CAS REGISTRY NUMBERS:
71-58-9 67763-96-6 67763-97-7 involvement of IGF-I and IGF-II and their receptors in medroxyprogesterone acetate-induced growth of mouse mammary adenocarcinomas

21/7/29 (Item 3 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)


119063875 CA: 119(7)63875k CONFERENCE PROCEEDING
Growth factors in murine mammary adenocarcinomas induced by progestins
AUTHOR(S): Charreau, Eduardo H.; Elizalde, Patricia; Guerra, Fabiana;

Lanari, Claudia; Kordon, Edith; Pasqualini, Christiane Dosne
LOCATION: Inst. Biol. Med. Exp., Buenos Aires, Argent.
JOURNAL: Horm. Carcinog., Proc. Int. Symp., 1st EDITOR: Li, Jonathan J. (Ed), Nandi, Satyabrata (Ed), Li, Sara Antonia (Ed), DATE: 1992 PAGES: 138-44 CODEN: 58ZSAS LANGUAGE: English MEETING DATE: 910000 PUBLISHER: Springer,New York, N. Y
SECTION:
CA202010 Mammalian Hormones
IDENTIFIERS: progestin mammary adenocarcinoma growth factor
DESCRIPTORS:
Progestogens...
mammary adenocarcinoma induction by, growth factors role in
Animal growth regulators...
mammary adenocarcinoma induction by progestins in relation to
Mammary gland,neoplasm, adenocarcinoma...
progestin-induced, growth factors role in

21/7/30 (Item 4 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)


113038278 CA: 113(5)38278m JOURNAL
Estradiol dependence of the specific mammary tissue targeting of polyoma virus oncogenicity in nude mice
AUTHOR(S): Berebbi, M.; Martin, P. M.; Berthois, Y.; Bernard, A. M.; Blangy, D.
LOCATION: CNRS, 13009, Marseille, Fr.
JOURNAL: Oncogene DATE: 1990 VOLUME: 5 NUMBER: 4 PAGES: 505-9
CODEN: ONCNES ISSN: 0950-9232 LANGUAGE: English
SECTION:
CA214001 Mammalian Pathological Biochemistry
IDENTIFIERS: estradiol breast adenocarcinoma induction polyoma virus
DESCRIPTORS:
Virus,animal, polyoma-...
adenocarcinoma of breast induced by, estradiol dependency of, in mouse model, estradiol-independent tumor growth in relation to
Receptors...
for estradiol and progesterone, of adenocarcinoma cells of breast, in mouse model, estradiol-dependent tumor induction and estradiol-independent tumor growth in relation to
Mouse...
polyoma virus induction of breast adenocarcinoma in, estradiol dependency of, estradiol-independent tumor growth in relation to
Mammary gland,neoplasm, adenocarcinoma...
polyoma virus induction of, estradiol dependency of, in mouse model, estradiol-independent tumor growth in relation to
Carcinoma,adeno-...
polyoma virus induction of, estradiol dependency of, of breast, in mouse model, estradiol-independent tumor growth in relation to
CAS REGISTRY NUMBERS:
50-28-2 57-83-0 biological studies, receptors for, of adenocarcinoma cells of breast, in mouse model, estradiol-dependent tumor induction and estradiol-independent growth in relation to

21/7/31 (Item 1 from file: 351)

DIALOG(R)File 351:Derwent WPI


000690441
WPI Acc No: 1970-27174R/197016
Adamantane derivs with beta-adrenergic blocking and - local anaesthetic activity
Patent Assignee: SOC D'ETUDES DE RECHERCHE (SODM )
Number of Countries: 006 Number of Patents: 007
Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week | |
|---|---|---|---|---|---|---|---|
| BE 740388 | A | | | | | 197016 | B |
| DE 1952874 | A | | | | | 197019 | |
| FR 2021124 | A | | | | | 197045 | |
| GB 1274200 | A | | | | | 197220 | |
| US 3663617 | A | | | | | 197223 | |
| JP 72042259 | B | | | | | 197243 | |
| US 3748346 | A | | | | | 197333 | |

Priority Applications (No Type Date): GB 6849917 A 19681021

Abstract (Basic): BE 740388 A

Adamantane derivs with beta-adrenergic blocking and local anaesthetic activity. M3A. are new cpds. of formula: primary or sec. amino with one or two alkyl (C1-C8) opt. unsatd. or one R1 may be cycloalkyl (C4-C7 ) the other being Hi or R1 and R2 with the N atom may form a N-heterocyclic ring opt. containing an O atom or another N-atoms). including acid addition salts of (I).

Activity as sympathicolytic, myelitic, analgesic and esp. local anaesthetic and beta-adrenergic blocking agents which are stable to light and heat.

Preparation by: British Priority application is in name of Centre de Recherchus Marcel Midy

Derwent Class: B05
?logoff hold